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MINUTES

FOR THE YEAR

1891-92.

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MINUTES OF THE SENATE.

FOR THE YEAR 1891-92.

No. 1.

THE 25TH APRIL, 1891.

Present.

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.
Vice-Chancellor, in the Chair.

C. H TAWNEY, ESQ., C. I. E.
RAI KANAILAL DE, BAHADUR, F. C. S., C. I. E.
THE HON'BLE SIR ALFRED CROFT, K. C. I. E.
COL H. S. JARRETT.
DR. K. MCLEOD, F. R. C. S.
BABU OMESH CHUNDER DUTT.
A. M. BOSE, ESQ.
BABU KALICHARAN BANERJEE.
F. J. ROWE, ESQ.
BABU SURYYAKUMAR SARBADHIKARI.
A. M. NASH, ESQ.
REV. K. S. MACDONALD, D. D.
J. S. SLATER, ESQ.
BABU RADHIKAPRASAD MOOKERJEE, C. E., A. M. I. C. E.
RAI LALMADHAB MOOKERJEE, BAHADUR.
DR. D. O'C. RAYE.
,, E. A. BIRCH.
BABU GAURISANKAR DE.
SIR JOHN EDGAR, K. C. I. E., C. S. I.
BABU DEBENDRANATH RAY.
RAI KSHETRANATH CHATTERJEE, BAHADUR, M. I. C. E.
H. M. PERCIVAL, ESQ.
RAI RADHIKAPRASANNA MOOKERJEE, BAHADUR.
BABU ISANCHANDRA BASU.
BABU NILMANI MOOKERJEE.
BABU SARADACHARAN MITRA.
NAWAB MEER MUHAMMAD ALI.
REV. A. W. ATKINSON.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.
THE VERY REV. FR. A. NEUT, S. J.
BABU BRAHMAMOHAN MALLIK.
J. H. GILLILAND, ESQ.
BABU DURGAMOHAN DAS.
,, HARAPRASAD SASTRI.
MAULAVI AHMAD.
BABU UMESCHANDRA DATTA.
,, RAJANINATH RAY.
SHAMS-UL-ULAMA SHAIKH MAHMUD GILANI.
J. C. BOSE, ESQ., B. SC.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.
,, GANESCHANDRA CHANDRA.
REV. H. WHITEHEAD.
BABU SYAMACHARAN GANGULI.
RAI GUNABHIRAM BARUYA, BAHADUR.
REV. S. B. TAYLOR.
BABU JOGINDRACHANDRA GHOSH.
BABU MAHENDRANATH RAY.

1. Babu Asutosh Mukhopadhyay moved that the following recommendation of the Syndicate be adopted :—

That Maulavi Muhammad Yousuff, Khan Bahadur, be appointed Tagore Law Professor for the term of one year from the 1st November 1891, and the subject of his lectures be the Mahomedan Law relating to Marriage, Dower Divorce, Legitimacy, and Guardianship of Minorsaccord ing to the Sunnis.

Babu Saradacharan Mitra seconded the motion, which was carried unanimously.

2. Dr. McLeod moved the adoption of the following recommendation of the Syndicate :—

That every candidate who has failed at any Medical examination be required before re-admission to examination to produce evidence that he has received satisfactory and regular instruction at a Medical School recognised by the University in the subject or subjects in which he has been rejected.

The mover said that, if the rule was introduced, several changes would be necessary in the regulations regarding the L. M. S. examinations at paras. 4, 10 and 18. In the M. B. regulations the same changes would follow in paras. 4, 10 and 15, but the changes would not be of a radical character. They simply amounted to additions in the spirit of the proposed rule to the conditions for readmission to examination. Students would, if the recommendation were accepted and confirmed, have to furnish evidence that they had actually applied themselves to the subject or subjects in which they had failed. At present students habitually came up year after year and failed; some trusted to chance, others to the contingency of having more lenient examiners, and others hoped to pass some time or other; there was nothing to show that they really prosecuted their studies during the intervals of appearance. Another reason for the change was that in the F A. and B. A. examinations students were required, not only to pay the necessary fees, but also to show that they had undergone a regular course of instruction in a proper College; and it was considered desirable to assimilate the Medical regulations to these. There seemed to be more reason for this in the case of the Medical examinations, because of the more technical character of the subjects of study, which could be much more easily and profitably learned in classes than in private. Another reason was that in most schools in Europe it was the invariable rule that when students were found deficient in their studies they were obliged not only to go up again before they were allowed to pass, but also to undergo a further period of study in the subject in which they had failed. It had been objected that the rule, if introduced, would entail additional expense upon poor students; but he was

in a position to state that this matter had been considered by the College Council, which had decided that students should not, under the circumstances, be required to pay a fresh fee for additional courses.

Col. Jarrett seconded the motion.

Babu Debendranath Ray pointed out some practical difficulties in the way, if the resolution was passed in its present form. The words "any medical" examination were used, and for these examinations the University had prescribed a certain course of study, and had laid down certain conditions. These difficulties would arise in the Honours in Medicine and M. D. examinations. He therefore proposed that after the words "medical examination" the words "except the Honour test and the M. D. degree" be inserted, and after the words "readmitted" be added the words "any candidate already an L. M. S. who has failed for the second M. B., and who can produce satisfactory evidence of having had charge of a dispensary or other practical post necessitating continued attention to professional subjects, need not undergo the special instruction named, but will be eligible to proceed to the second M. B. in due course."

Dr. McLeod was prepared to accept the amendment.

The Vice-Chancellor pointed out that, even with the amendments proposed, the motion was not exactly in a form such as would be capable of being incorporated with the Regulations. Unless the motion and amendment were exactly worded, he did not think that the change proposed would be sanctioned by the Governor-General in Council.

Dr. McLeod agreed with this view

The Rev. Dr. Macdonald suggested, that it would be advisable to state explicitly that evidence should be produced of satisfactory instruction having been received since the date of the last failure.

Mr. A. M. Bose pointed out that the proposal was not sufficiently definite in several particulars. He thought the whole matter required reconsideration at the hands of the Syndicate.

Rai Lal Madhab Mookerjee, Bahadur, did not share in the views expressed by either the mover or seconder of the

motion. He believed that the resolution would cause the number of students who now come up for licences and degrees to lessen. These degrees and licences were given in Engineering as well as Law, and the analogy in reference to the students who were trained for the B. A. or F. A. who were obliged, after failure, to undergo another course of study, was not true. He denied that precedents existed for the course proposed, as he knew that in the London, Dublin or Madras Universities such precedents did not exist. When this question came up before the Medical Faculty, it was carried by the bare vote of the President only. The resolution was not only worded indefinitely, but it was complicated. Medical education was not progressing so satisfactorily as many wished. Candidates were dwindling in numbers, and this process was going on to the detriment of the whole Medical education of Bengal.

Dr. Birch thought it would be wise to refer the matter back to the Syndicate, because the wording of the resolution required elaboration of details in connexion with the amendment and the resolution. He was responsible to some extent for the wording of the amendment, of which he approved, but wished to say a few words in reply to the challenge which had been thrown out by the last speaker. He distinctly stated that the practice Dr. McLeod had alluded to was in vogue in England, where students who failed and were referred back to their studies were permitted to come forward again only when they had evidence to show that they had studied the subjects in which they had failed. He had known many such cases. The different Universities regarded these matters in different lights. The Colleges required certain restrictions which the Universities did not. The analogy drawn by the last speaker was not a fair one. The lawyer took his law from the judge who was responsible, but the medical man in the sick room was lawyer, jury and judge in the case, and there was no arbitrator in a case of life and death. On this ground alone too many precautions could not be taken to educate men who were entrusted with such enormous responsibilities.

The Rev. Dr. Macdonald was of opinion that the resolution should be withdrawn for the present and brought forward again in a form more suited to the Regulations.

The amendment and resolution were here both withdrawn on the understanding that Dr. McLeod would be allowed to bring forward his motion again after due amendment.

3. Mr. Slater moved the adoption of the following recommendation of the Syndicate :—

That the following revised Regulations for the examination for Honours in Engineering be adopted in place of those on pp. 69-71 of the Calendar for 1891 :—

(1) An examination for Honours in Engineering shall be held annually, in Calcutta, commencing at such time as the Syndicate shall determine, the date to be notified approximately in the Calendar for the year.

(2) Any candidate who has passed in that or any previous year, the examination for the degree of "Bachelor in Engineering" or for a "Licence in Engineering" shall be eligible for admission to the examination for Honours.

(3) Every candidate shall send in his application to the Registrar at least three months before the date fixed for the commencement of the examination.

(4) A fee of Rupees one hundred shall be payable by each candidate, and no candidate shall be admitted until he has paid this fee to the Registrar. A candidate who fails to pass, or to present himself for examination shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent examinations on payment of a like fee of Rs. 100 on each occasion.

(5) The examination shall be written and oral in the following subjects :—

I.—MATHEMATICS.

(i) Statics.

(ii) Dynamics. Impact of bodies—Uniformly accelerated motion, and gravity—Motion on a curve—Vibration of a simple pendulum—Motion of projectiles—Central forces—Motion of rigid bodies about a fixed axis—Work and energy.

(iii) Optics—Geometrical.

(iv) Spherical Trigonometry.

II.—ENGINEERING.

(i) Applied Mechanics—Advanced graphic statics—Theorem of three moments—Ellipse of stress—Internal stresses, simple and compound, in solid bodies—Revetment walls, abutments, piers, and arches.

(ii) Hydraulics—General flow of water—Impact and reaction of water jets and vanes—Jet propellers—Water pressure engines—Water wheels—Turbines—Hydraulic Ram—Pumps.

(iii) Theory and Practice of Building.—Properties of building materials—Details of design of various parts of buildings and bridges—Road, Railway, Canal and River Engineering.

III.—GEODESY.

General principles of surveying—Measurement of base lines with corrections for level and temperature—Reduction of angles to the plane of the Horizon—Reduction to the centre—Spherical excess—Method of distributing errors—Calculation of sides of triangles by method of chords, by Legendre's theorem, or by Spherical Trigonometry—Determination of Latitudes, Longitudes and Azimuths—Heights of stations and terrestrial refraction—Measurement of arcs of Latitude and Longitude—Determination of the figure of the Earth by geodetic measurement and by the pendulum.

(6) The examination shall be both written and oral; the written examination shall be conducted by means of printed papers in each of the following subjects:—

a.	Statics and Optics.	Group I.
b.	Dynamics and Spherical Trigonometry.	
c.	Geodesy.	
d.	Applied Mechanics.	Group II.
e.	Do. do.	
f.	Do. do.	
g.	Hydraulics.	
h.	Do.	
i.	Practice of building.	
j.	Do. do.	

(7) The oral examination will be in all or any of the subjects in group II.

(8) As soon as possible after the examination, the Examiners shall meet and draw up, and submit to the Syndicate, a report giving the names of the candidates whom they consider entitled to "Honours in Engineering" arranged in order of merit, and the Syndicate shall publish the list in their next Minutes.

He said that the reason for the change required was that the subjects enumerated were not properly defined. The Faculty of Engineering were first asked to define the course of study, and when they considered the question, they found that not only was it desirable to define more fully the course of study for Honours in Engineering, but that the course required some slight modifications to bring it up to the present requirements, the old Regulations having been made twenty years ago. The proposals of the Faculty were declared here and it remained for the Senate to approve of them.

Sir Alfred Croft pointed out that certain objections had been raised to the mathematical portion of the proposed standard. As the objections had just been brought to his notice, and there had been no time to consider them, he thought the proposals should be withdrawn and referred back to the Syndicate for reconsideration.

The suggestion was acted upon and the recommendation withdrawn.

4. Sir Alfred Croft, moved that—

In para. 9 of the Bye-laws relating to the Syndicate, for the word "order" be substituted the words "make rules for the conduct of."

The Regulations provided that it should be the duty of the Syndicate to order examinations and fix the times at which they should be held. In accordance with this, the Syndicate had regularly undertaken the conduct of all examinations and had framed Regulations with that object. Of late these Regulations had become very complex and elaborate, and from time to time they were revised and amended. At a recent meeting of the Syndicate the question arose whether a particular Board of Examiners had acted in accordance with these rules. On investigating the subject, some doubt was expressed whether the rules had the

validity which they ought to have. The Regulations gave the Syndicate power to 'order' examinations, and though the word 'order' might fairly be taken to include the making of all necessary arrangements for the examinations, and had in fact always been so understood, yet it was thought better to set the matter at rest once for all, by going up to the Senate for the necessary sanction.

Sir John Edgar seconded the motion.

Babu Mahendranath Ray moved as an amendment that in para 9 of the Bye-laws relating to the Syndicate the word "and" after the word "Regulations" be omitted and the following be inserted after the word "held':— "And subject to the approval of the Senate to make rules for the conduct thereof." The necessity of framing rules for the conduct of examinations was not denied, but as they embraced matters of general principle, these should be governed by the Senate, and not by the Syndicate. The Regulations, which had been passed from time to time, had obtained not only the sanction of the Senate, but had received the sanction of the Governor-General in Council as well, and the question now was whether they should give to the Syndicate the power to frame rules as important as the Regulations without the approval and sanction of the Senate. The Act of Incorporation vested in the Senate power to settle the manner in which examinations were to be held, and should this power be delegated to the Syndicate without any reservation whatever? It seemed to him, therefore, that the settlement of rules relating to general principles should rest with the Senate and should not be left to the discretion of the Syndicate. The amendment proposed would leave the Syndicate power to deal with details, the power to frame rules for the conduct of examinations being left with the Senate.

Babu Durgamohan Das seconded the amendment.

Mr. A. M. Bose was in favour of the amendment, and thought it but right that the principle should be laid down that the Senate ought to make rules and the Syndicate carry them out.

Sir Alfred Croft thought that there should be a distinction between the functions of Senate and Syndicate. The Senate was a large body, very well adapted to discuss principles, but not so well adapted to settle intricate and technical details He thought that when great care was taken

in selecting members of the Syndicate, that body could be trusted to deal with practical questions of this kind, depending on altered circumstances which arose from time to time. The Syndicate was, in fact, the Executive Committee of the Senate. Putting all these considerations aside he would remind them that the Syndicate had for years exercised these functions, and for the past four years these rules had been published in the Calendar, and never had any objection been taken to, or any criticism passed upon, the rules. By rule 13 of the Bye-laws relating to the Syndicate, it was open to the Senate to call in question or review or revise or send back for consideration any act done or any rule passed by the Syndicate. But these rules had never been called in question. Why then should they suppose that the Syndicate could not be trusted in this matter in future?

The Vice-Chancellor then put the amendment to the vote, and on a show of hands there were 20 votes for and 22 against it. It was, therefore, declared lost. A poll was demanded, and was taken, with the result that there were 20 votes for and 22 against it. It was again declared lost.

The original motion was then put to the vote and carried by 22 votes for and 16 against it.

5. Sir Alfred Croft moved that the Annual Report of the Syndicate for the year 1890-91 be adopted.

Babu Umes Chandra Datta seconded the motion which was carried unanimously.

6. On the motion of Sir Alfred Croft, seconded by the Rev. Fr. Neut, Mr. A. M. Nash was appointed Registrar of the University for two years.

7. Babu Durgamohan Das moved that a Committee be appointed to consider the rules regarding the affiliation of colleges and schools, and for suggesting any alterations and improvements therein. The rules, it was stated, were to be found at page 72 of the Calendar for 1891, and were but three in number, and had been framed so long ago as 1864. The reason for the proposal was then, that probably at the time they were considered sufficient and the governing bodies of the University did not probably then think that any question under them would arise in connexion with affiliated colleges. When the

conditions of these three rules were fulfilled, he did not think that the Syndicate had any option in the case of any application for affiliation. At least they did not touch any point in reference to the place where the college was situated, and as to whether there were needs for another in the place where one was already existing. These were questions which in recent years had arisen, and which under the rules could not be dealt with. The mover of the motion then entered into a long statement of the affairs of the Brajamohan and Rajchandra Colleges at Barisal, a matter which had exercised the University for some time past. He narrated the history of the establishment of the two Colleges and the action taken by the Syndicate in reference to both. He alluded to the letter of Mr. Ewbank and also to one from the Syndicate, in which a promise was made to consider the whole question of affiliation of colleges, and finally urged that since 1864 circumstances had so altered that there was real need for revising these rules, and for the appointment of a Committee.

Babu Rajaninath Ray seconded the motion.

Mr. A. M. Bose hoped the amendment would be accepted with the addition of the words "recognition of" before the word "school." He did not, however, vote for the amendment exactly upon the grounds on which the mover had placed it. He supported it on the grounds that the circumstances of education in Bengal had so materially altered since 1864, the number of institutions had so largely increased, their discipline had so materially changed, that on these grounds there was ample need for a revision of the rules regarding their affiliation to the University. Opinion was also needed upon other points, which he indicated, and he thought, on the whole, that the rules could with advantage be altered. He also thought that another point was well worthy of consideration, *viz.*, as to whether affiliation in the first instance should not be for a limited period, or on probation. He drew attention to the regulations respecting affiliation in other Universities, and by referring to the history of the present rules showed that they had not received the sanction of the Senate, and had therefore no legitimate claim to be included in the Regulations of the University. The rules regarding the recognition of schools were in a fragmentary and incomplete condition, and also required consideration.

Sir Alfred Croft was glad to hear that the mover of the resolution had no charge to make against the Syndicate in the matter. Referring to the cases of the two Barisal Colleges, Sir A. Croft said that the matter had been most carefully considered, and the Syndicate found that they had no ground for making a distinction between them, and therefore recommended both for affiliation. Referring to the letter of the Principal of the Patna College, he said that he did not in any way agree with the sentiments which that letter expressed. He did not see that because a Government College was in possession in any place, it should regard a private College as an enemy and an intruder, but should on the contrary give it every encouragement. Coming back to the main point, he should say it was very likely that in the course of 25 years the necessity had arisen for a revision of these rules. He had no objection to the motion on its merits, but the question was now before the Government of India, and, as a matter of propriety, he thought it would be better to wait until the University heard what reply the Government had to make to their recommendations as to the Act of Incorporation in reference to affiliation and other matters. Holding this view, he should vote against the motion.

The motion, corrected as suggested by Mr. A. M Bose, was then put to the vote, and on a show of hands declared carried, 14 voting for, and 11 against, it.

Babu Durgamohan Das moved that the Committee consist of the following gentlemen :—

Sir Alfred Croft, Mr. A. M. Bose, Babu Kalicharan Banerjee, Rev. Dr K. S. Macdonald, Mr. A. M. Nash, Rai Radikaprasanna Mookerjee, Bahadur, and the mover

The motion was carried unanimously.

8. The Faculties for the year 1891-92 were constituted as follows :—

ARTS.

President :

THE HON'BLE SIR ALFRED CROFT, M.A , K.C.I.E.

Members :

The Hon'ble the Lieutenant-Governor of Bengal.
The Hon'ble the Lieutenant-Governor, North-Western Provinces.
The Hon'ble the Lieutenant-Governor of the Panjab.
The Right Rev the Lord Bishop of Calcutta.

The Hon'ble Sir David Barbour K.C S.I.
The Hon'ble P. P. Hutchins, C S.I.
Pandit Iswarachandra Vidyasagara, C.I E
Nawab Abdool Luteef, Bahadur, C I E.
Raja Rajendralala Mitra, D L., C I E.
Rai Jagadananda Mookerjee, Bahadur
Babu Bhudeb Mookerjee, C I E
Rev. J. P. Ashton, M A.
J. Sime, Esq. B A
Charles H Tawney, Esq , M.A., C I.E.
A O Hume, Esq , C B.
Raja Sivaprasad, C S.I.
The Hon'ble Mahendralal Sircar, M D , C I.E.
Rai Kanailal De, Bahadur, F.C S , C I.E
J. Beames, Esq , C.S.
Col H. S. Jarrett.
G King, Esq., M B , LL D F.L S., F.R S , C.I.E.
Raja Durgacharan Law, C.I E.
Babu Gaurdas Basak
K. McLeod, Esq., M A. M D., F.R C.S.
Babu Krishnakamal Bhattacharyya, B.L.
Babu Omeshchunder Dutt.
The Hon'ble J O'Kinealy, M A., LL D., C.S.
M. S Howell, Esq , C S , C I.E.
Maharaja Bahadur Sir Jotindramohan Tagore, K C.S I.
Raja Jaykissen Das, Bahadur, C.S.I.
J. C. Nesfield, Esq., M A.
Sir Syed Ahmed, LL D., K.C.S I.
The Hon'ble Baba Khem Singh Bedi, C I E
Sir A Mackenzie, K.C.S.I
D D Cunningham, Esq , M.B., F R S
The Hon'ble Ameer Ali, M.A., B.L , C I E.
Nawab Ashgar Ali, Khan Bahadur, Diler Jung, C.S I
J. Eliot, Esq , M A.
Mahamahopadhyay Mahesachandra Nyayaratna, C.I.E
Rev Lalbihari Day.
The Very Rev Father E. Lafont, S J , C.I E.
A. M. Bose, Esq , M.A.
Babu Kalicharan Banerjee, M A., B.L.
C. J. Lyall Esq B A , C.S , C.I.E
W. C. Bonnerjee, Esq.
Raja Sir Saurindramohan Tagore, Kt., Mus. Doc., C.I.E.
A Pedler, Esq , F.C.S.
A. E Gough, Esq , M A
The Hon'ble Arthur Wilson, M.A.
P. K. Ray, Esq , D. Sc.
A. F. Rudolf Hoernle, Esq , Ph. D.
Babu Trailokyanath Mitra, M A., D.L.
W Griffiths, Esq , M.A.
The Hon'ble Gooroo Dass Banerjee, M.A., D.L.
F. J. Rowe, Esq , M.A.
The Hon'ble Rashbehary Ghose M.A , D L.
Sir Edward Buck, Kt , C S.
A. M. Nash, Esq., M.A
Babu Krishnabihari Sen, M.A.
Rev. K. S Macdonald, M A., D D
Babu Hemchandra Banerjee, B L.
Maulavi Muhammad Yousuff, Kha Bahadur, B.L.
W. T Webb, Esq., M.A.

The Right Rev. A. P. Bigandet, D D.
G. Bellett, Esq , M.A.
J Willson, Esq., M.A.
Syud Amir Hossein, Khan Bahadur, C.I.E.
The Hon'ble Sir H. L. Harrison, Kt., B.A., C.S.
G A. Grierson, Esq., B.A , C S.
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Maulavi Ferajul Islam, Khan Bahadur, B.L.
Raja Piyarimohan Mukerjee, M.A., B.L., C.S.I.
W. E. Ward, Esq., M.A., C.S I.
Clarmont Daniell, Esq., C.S.
Babu Pramadadas Mitra.
Maulavi Muhammad Sami-ullah Khan, C.M.G.
Sir John Edgar, K C.I E., C.S I.
Babu Suryyakumar Adhikari, B.A.
The Hon'ble Prince Muhammad Furrokh Shah.
Maulavi Abul Khair Muhammad Siddiq, M.A.
Rai Rajkumar Sarbadhikari, Bahadur, B. L.
J R. Reid, Esq., C S.
The Hon'ble Raja Uday Pratab Sing of Bhinga.
The Hon'ble Maulavi Abdul Jubbar, Khan Bahadur.
C. A. Martin, Esq , LL D.
A. Ewbank, Esq , M A.
W. Booth, Esq., M.A.
G. Thibaut, Esq , Ph. D.
H. M. Percival, Esq., M.A.
Rai Radhikaprasanna Mukerjee, Bahadur.
Babu Bankimchandra Chatterjee, B.L.
Maulavi Dilwar Husain Ahmed, B.A.
Babu Isanchandra Bose, M.A., B L.
Babu Pratapachandra Ghosha, B A.
Rev. J. Hector, M.A.
Babu Bholanath Pal, M.A.
Rai Lakshmi Sankar Misra, Bahadur, M.A.
Babu Nilmani Mukerjee, M.A., B.L.
Maulavi Abdul Hai.
Babu Saradacharar Mitra, M.A., B.L.
The Hon'ble H J. S. Cotton, C.S.
E. White, Esq , C.S.
Nawab Meer Mohamed Ali.
C. J. H. Warden, Esq., M D.
J. Van Someren Pope, Esq., M.A.
J. Mann, Esq., M.A.
The Rev. A. W. Atkinson, M.A
Babu Golapchandra Sarkar, M.A., B.L.
Babu Jogindrachandra Ghosh.
Kazi Sayyud Reza Hossain, Khan Bahadur.
Rai Taraprasanna Ray, Bahadur, F.C.S.
The Most Rev. Paul Geothals, D.D.; S.J.
The Hon'ble Raja Amir Hasan, Khan Bahadur.
Col. C. W. I. Harrison, R.E.
J. Scully, Esq , L.R.C.P , M.R.C.S.
T. C. Lewis, Esq., M.A.
Raja Lachhman Singh.
The Very Rev. Father A. Neut, S J,
Ram Krishna Gopal Bhandarkar, Esq., M.A., Ph. D., C.I.E.
A. C. Edwards, Esq., M A.
Babu Brahmamohan Mallik.
Nagendranath Ghosh, Esq.

The Hon'ble Bireswar Mitra.
Babu Chandranath Basu, M.A., B.L.
J. Wood-Mason, Esq.
J. H. Gilliland, Esq., B.A.
Babu Haraprasad Sastri, M.A.
Maulavi Ahmad.
Babu Umeschandra Datta, B.A.
Babu Rajaninath Ray, M.A.
W. King, Esq., B.A., D. Sc., F.G.S.
C. E. Buckland, Esq., B.A., C.S.
Shams-ul-Ulama Shaik Mahmud Gilani.
Babu Pratapchandra Majumdar.
G. W Küchler, Esq., M.A.
C. Little, Esq , M.A.
J. C. Bose, Esq., B.A., B. Sc.
Babu Srinath Das.
Babu Asutosh Mukhopadhyay, M.A., F.R.A.S., F.R.S.E.
Maulavi Muhammad Abdur Rawaf.
The Hon'ble J. F. Norris, Q.C.
The Venerable Archdeacon F. R. Michell.
Rev. H. Whitehead, M.A.
Maulavi Ashrafuddin Ahmad.
Babu Syamacharan Ganguli, B A.
Babu Bipinbihari Gupta, M.A.
H. H Risley, Esq . B.A.
Rev. J. Morrison, M.A., B.D.
Babu Sambhuchandra Mukerjee.
Rai Gunabhiram Barua, Bahadur.
Rev. S B Taylor, M.A.
Babu Jogindrachandra Ghosh, M.A., B.L.
Babu Mahendranath Ray, M.A., B L.

LAW.

President :

THE HON'BLE AMEER ALI, M.A., B.L., C.I.E.

Members :

The Hon'ble the Chief Justice of Bengal.
The Hon'ble Sir Alexander Miller, Kt., Q.C.
Nawab Abdool Luteef, Bahadur, C.I.E.
Rai Jagadananda Mookerjee, Bahadur.
The Hon'ble Sir Charles Paul, B.A., K.C.I.E.
Henry Bell, Esq.
Arthur Phillips, Esq., M.A.
Babu Annadaprasad Banerjee.
Babu Krishnakamal Bhattacharyya, B.L.
The Hon'ble Sir Romeshchunder Mitter, Kt., B.L.
The Hon'ble J. O'Kinealy, M.A., LL.D., C.S.
C. F. Egerton Allen, Esq , B.A.
A. M. Bose, Esq., M.A.
Babu Kalicharan Banerjee, M.A., B.L.
The Hon'ble H. T. Prinsep, C.S.
The Hon'ble G H. P. Evans.
Babu Mohinimohan Ray.
W. C. Bonnerjee, Esq.
The Hon'ble Arthur Wilson, M.A.

Babu Trailokyanath Mitra, M.A., D.L.
The Hon'ble Gooroo Dass Banerjee, M.A., D.L.
The Hon'ble Rashbihari Ghosh, M.A., D.L.
The Hon'ble Syed Mahmud.
The Hon'ble W. Tyrrell, C.S.
Babu Hemchandra Banerjee, B.L.
Maulavi Muhammad Yusuf, Khan Bahadur, B.L.
The Hon'ble L. R. Tottenham, C.S.
Syed Amir Hossein, Khan Bahadur, C.I E.
Maulavi Suraj-ul Islam, Khan Bahadur, B.L
Raja Piyarimohan Mukerjee, M.A.,B.L., C S.I.
The Hon'ble Douglas Straight.
The Hon'ble H Beverley, M.A., C.S.
Manmohan Ghose, Esq.
Rai Rajkumar Sarbadhikari, Bahadur, B.L.
The Hon'ble E. J. Trevelyan.
The Hon'ble Chundermadhub Ghose
The Hon'ble Maulavi Abdul Jubbar, Khan Bahadur.
Babu Saradacharan Mitra, M.A., B.L.
L. P Delves Broughton, Esq.
K M. Chaterji, Esq., B L.
The Hon'ble Pandit Ajodhyanath.
Babu Golapchandra Sarkar, M.A., B.L.
Nagendranath Ghose, Esq.
A. F Abdur Rahman, Esq.
Babu Durgamohan Das.
Babu Srinath Das.
Babu Asutosh Mukhopadhyay, M.A., F.R.A.S., F.R.S.E.
Babu Ganeschandra Chandra.
The Hon'ble J. F. Norris, Q.C.
Maharaja Bahadur Sir Narendrakrishna, K.C.I.E.
Babu Jogindrachandra Ghosh, M.A , B.L.
Babu Mahendranath Ray, M.A., B.L.

MEDICINE.

President :

E. A. Birch, Esq., M.D.

Members :

Rai Kanailal De, Bahadur, F.C.S., C.I.E.
G. King, Esq., M.B., LL.D. F.L.S., F.R.S., C.I.E.
K. McLeod, Esq., M.A., M.D., F R.C.S.
D. D. Cunningham, Esq., M.B., F.R.S.
A. S. Lethbridge, Esq., M.D., C.S.I.
Babu Jagadbandhu Basu, M.D.
Babu Suryyakumar Sarbadhikari.
R Harvey, Esq., M.D.
J. M. Coates, Esq., M.D.
Rai Lalmadhab Mukerjee, Bahadur, L.M.S.
D. O'C. Raye, Esq., M.D.
S. C. Mackenzie, Esq., M.D.
Babu Dinabandhu Datta.
Babu Debendranath Ray, L.M.S.
J. O'Brien, Esq., M.A., M.D., F.R.C.S.E.
U. C. Mukerjea, Esq ,
C. J. H. Warden, Esq., M.D.

Rai Taraprasanna Ray, Bahadur, F.C.S.
J. Scully, Esq.
Maulavi Zahiruddin Ahmed, L.M.S.
J. Wood-Mason, Esq.
A Crombie, Esq., M.D.
A H Hilson, Esq , M.D.
J. F. P. McConnell, Esq., M.D.

ENGINEERING.

President :

COLONEL J. MCNEILE, R E.

Members :

His Excellency the Commander-in-Chief of the Forces in India, G C.B . G.C I.E , R.A
The Hon'ble Colonel R. C. B. Pemberton, R.E.
The Hon'ble Lieutenant-General Henry Brackenbury, C.B., R.A.
The Hon'ble Mahendralal Sircar, M.D., C.I E.
The Hon'ble Sir Alfred Croft, M.A., K.C.I.E.
J. Eliot, Esq , M.A.
A. Pedler, Esq., F.C.S.
J. S. Slater, Esq.
Babu Radhikaprasad Mukerjee, C.E., A.M I.C.E
S. F. Downing, Esq., B.A., L C.E.
Colonel C. W. I. Harrison, R.E.
Babu Nilmani Mitra.
C. W. Odling, Esq , M.E , M.I C.E.
R. B. Buckley, Esq . M I C E . M.I M.E.
Rai Kshetranath Chatterjee, Bahadur, M I.C.E.
Babu Madhabchandra Ray, B.A , B C.E.
W Booth, Esq , M.A
C. J H. Warden, Esq , M.D
F. J. E Spring, Esq., L.C.E., M.I.C.E.
W. H Jobbins, Esq.
W. King, Esq., B A., D, Sc , F.G.S.
J. H. Apjohn, Esq., M.A., M.I.C.E.
J. H. Gilliland, Esq., B.A.
C. Little, Esq., M A.

A. M. NASH,

Offg. Registrar.

(Confirmed).

GOOROO DASS BANERJEE,

Vice Chancellor.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 1.

THE 29TH APRIL, 1891.

Present:

THE HON'BLE MR JUSTICE GOOROO DASS BANERJEE, D. L.
Vice-Chancellor, in the Chair.

DR. K. MCLEOD, F. R. C. S.
J. S SLATER, ESQ.
SIR JOHN EDGAR, K. C. I E, C. S. I.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.

9. The minutes of the meetings of the Syndicate held on the 11th and 15th April, respectively, were read and confirmed.

10. Read a letter from the Deputy-Secretary to the Government of India in the Home Department, stating that the amendments in the Regulations therein recommended have been approved by His Excellency the Governor-General in Council, and that the Report of the Committee appointed to examine the Act of Incorporation of the University will form the subject of a separate communication.

ORDERED—

To be recorded.

ORDERED ALSO—

(i.) That the addition to the foot-note to para. 2 of the F. A. and B. A. Regulations come into operation from the examinations of 1893.

(ii.) That the change in para. 4 of the F. A. and para. 5 of the B. A. Regulations come into operation from the examinations of 1892.

(iii.) That the change in the B. L. Regulations, reducing the period of study to two academical years, and defining a regular course of study, come into operation from the examination of 1893.

(iv.) That the foot-note added to para. 2 of the B. L. Regulations refer to all future lectures.

(v.) That the change in the list of subjects prescribed for the B. L. examination come into effect from the examination of 1893.

11. The Registrar laid before the Syndicate a letter from Mr. Chick, Attorney-at-Law, requesting to be informed of certain facts respecting the result of the examination of his client Satischandra Mitra, who appeared at the last B. L. examination.

RESOLVED—

That the Registrar inform Mr. Chick of the facts of the case.

12. Read a letter from the Principal, Medical College, Calcutta, forwarding a petition from three of the unsuccessful candidates at the last Combined Preliminary Scientific and 1st L. M. S. examination, praying that as they secured a sufficient number of marks in Botany and Chemistry at the abovenamed examination they may be considered to have passed the Preliminary Scientific L. M. S. examination.

RESOLVED—

That the candidates who have passed in Chemistry and Botany be gazetted as having passed the Preliminary Scientific L. M. S.

13. Read a letter from the Rev. K. S. Macdonald, D. D., forwarding a copy of Blaikie's Elements of Dynamics and a copy of Geometrical Deductions, Book I, by Messrs. Blaikie and Thomson, and recommending their adoption as text books in Mathematics.

RESOLVED—

That the letter be referred to the Board of Studies in Mathematics.

14. Read a letter from Babu Bholanath Pal, requesting that his "Readings from Modern English Literature" may be prescribed as the text book in English for the Entrance examination of 1893.

RESOLVED—

That the letter be referred to the Board of Studies in English.

15. Read a letter from the Principal, Rajshahye College, suggesting that the Head Masters of Schools sending up candidates for the Entrance examination should be required to give their own estimate of the ages of the candidates.

RESOLVED—

That the Syndicate do not consider it advisable to adopt the suggestion.

16. Read a letter from the Principal, Berhampur College, requesting to be informed whether Act XL of 1858 (the Guardianship Act) and Act XXVII of 1860 (the Certificate Act) both of which have been repealed by Act VIII of 1890 and Act VII of 1889 respectively, are still to be read as text books for the B. L. examination.

RESOLVED—

That the letter be referred to the Faculty of Law.

17. Read an endorsement from the Principal, Ripon College, forwarding an application from Narendranath Bhattacharyya, praying that, under the circumstances therein stated, he may be allowed to appear at the B. L. examination to be held in November next.

RESOLVED—

That the Principal be informed that the candidate must attend lectures from June to October 1891.

A. M. NASH,
Offg. Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES

OF

THE FACULTY OF LAW.

FOR THE YEAR 1891-92.

No. 1.

THE 8TH MAY, 1891.

Present:

THE HON'BLE MR. JUSTICE AMEER ALI, C. I. E., *President, in the Chair.*

BABU KRISHNAKAMAL BHATTACHARYYA.
BABU KALICHARAN BANERJEE.
BABU MOHINIMOHAN RAY.
THE HON'BLE MR. JUSTICE L. R. TOTTENHAM.
SYED AMIR HOSSAIN, KHAN BAHADUR, C. I. E.
BABU SARADACHARAN MITRA.
BABU GOLAPCHANDRA SARKAR.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.
BABU GANESCHANDRA CHANDRA.
BABU JOGINDRACHANDRA GHOSH.
BABU MAHENDRANATH RAY.

18. The Faculty met to name not more than three subjects upon one of which (to be selected by himself) the Tagore Law Professor to be appointed for the year beginning the 1st November 1892, will be required to deliver a course of lectures.

RESOLVED—

That the following three subjects be named :—

(1). The Law of Estoppel in British India.
(2). The Law relating to Joint Property and Partition in British India.
(3). The Law relating to Fraud, Misrepresentation and Mistake in British India.

19. A Sub-Committee consisting of the following gentlemen was appointed to revise the list of text books

for the examinations in Law with instructions to report in three weeks :—

The President.
The Hon'ble Sir Charles Paul, K. C I. E.
Babu Kalicharan Banerjee.
Babu Hemchandra Banerjee.
Babu Golapchandra Sarkar.
Babu Ganeschandra Chandra.

20. The Faculty resolved to recommend to the Syndicate that Act XL of 1858 (the Guardianship Act) and Act XXVII of 1860 (the Certificate Act) be omitted from the list of subjects to be read for the B. L. examination (Calendar for 1891, p. 186), and that Act VIII of 1890 and Act VII of 1889 be inserted in place of them.

(Confirmed),

AMEER ALI, *President.* A. M. NASH, *Registrar.*

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 2.

THE 9TH MAY, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,
Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
CHARLES H. TAWNEY, ESQ., C. I. E.
THE HON'BLE MR. JUSTICE AMEER ALI, C. I. E.
BABU MOHINIMOHAN RAY.
F. J. ROWE, ESQ.
A. M. NASH, ESQ.
J. S. SLATER, ESQ.
DR. E. A. BIRCH
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.

21. The minutes of the meeting of the Syndicate held on the 29th April, were read and confirmed.

22. Read a letter from the President of the Faculty of Arts appointing Mr. F. J. Rowe and Mr. A. M. Nash to be temporary members of the Syndicate during the absence, respectively, of Sir John Edgar and Sir Alfred Croft.

ORDERED—

To be recorded.

23. The Registrar enquired whether any change was to be made in the rule regarding re-examination (General Rule 13, Calendar, p. 115).

RESOLVED—

That the following words be added at the end of the first paragraph of the rule :—" and without any alteration of the standard."

24. Read applications from the undermentioned candidates for admission to the Premchand, Roychand

Studentship Examination, for the current year, opposite whose names are stated the subjects in which they desire to be examined :—

Names of candidates.	Subjects.
Durgadas Mukhopadhyay	... English, Philosophy, and History.
Hirendranath Datta	... English and Sanskrit.
Janakinath Bhattacharyya	... English, Sanskrit and Comparative Philology.
Saratchandra Mukhopadhyay	... English and History.
E. M. Wheeler	... English, Philosophy and Latin.

RESOLVED—

That the applicants be admitted to the Examination.

25. The following gentlemen were appointed Examiners for the Premchand Roychand Studentship Examination of 1891 :—

English	...	...	... Mr C. H. Tawney, C. I. E.
Philosophy	...	...	... Dr. D. Duncan.
Philology	...	...	... Dr. A. F. R. Hoernle.
Latin	...	...	... Mr. H. M. Percival.
History	...	...	... Mr. M. Prothero.
Sanskrit	...	...	... Babu Krishnakamal Bhattacharyya.

26. The following gentlemen were appointed Examiners for the B. L. and Honour Examination in Law, to be held in November 1891 :—

B. L.

The Hon'ble Mr. Justice Ameer Ali—President.
Mr. W. Gordon-Leith.
Mr. J. G. Apcar.
Babu Amarendranath Chatterjee.
Maulavi Suraj-ul-Islam, Khan Bahadur.

Honours in Law.

Mr. A. P. Handley.
Babu Srinath Das.

27. The undermentioned gentlemen were appointed to set the Examination Papers for the Entrance, F .A., B. A. and M. A. Examinations of 1891-92 :—

Entrance.

English	... Rev. A. P. Begg, B. A.
Mathematics	... W. Booth, Esq., M. A.
History and Geography	... M. Prothero, Esq., M. A.
Sanskrit	... Babu Krishnakamal Bhattacharyya, B. A.
Bengali	... Babu Saradacharan Mitra, M. A.

Arabic	...	Col H. S. Jarrett
Persian	...	Maulavi Ahmad.
Latin	...	F. J Rowe, Esq., M A.
Greek	...	C. H. Tawney, Esq., M. A., C. I. E.
French	...	Rev. Fr. V. de Campigneulles, S J.
Tamil	...	R. Dhanasukhoti, Esq.
Uriya	...	Babu Chaturbhuj Patnaik
Hindi	...	Babu Kanailal Sastri.
Urdu	...	Maulavi Ahmad.
Burmese	...	A. W. Lonsdale, Esq.
Armenian	...	T. Stephen, Esq.
Pali	...	J. Gray, Esq
Mahrathi	...	Mahadeo Yeshwant Dole, Esq.
Parbatia	...	Babu Kedarnath Chatterjee
Assamese	...	Rai Gunabhiram Baruya, Bahadur.
Telegu	...	C. Narayan Swamy, Esq.
Gujarathi	...	D. D. Mehta, Esq.
Drawing	...	W. H. Jobbins, Esq.

F. A.

English	...	W. T. Webb, Esq., M. A.
Mathematics	...	W. Booth, Esq., M. A. Babu Asutosh Mukhopadhayay, M. A., F. R. A. S., F. R. S. E.
Physics	...	P. Bruhl, Esq.
Chemistry	...	Rai Taraprasanna Ray, Bahadur, F. C. S.
History	...	H. M. Percival, Esq., M. A.
Logic	...	Arthur Venis, Esq., M. A.
Greek	...	C. H. Tawney, Esq., M. A., C. I. E
Latin	...	F. J. Rowe, Esq , M. A.
Sanskrit	...	Pandit Haraprasad Sastri, M. A. Babu Rajendrachandra Sastri.
Arabic	...	Col H. S. Jarrett.
Persian	...	Maulavi Abul Khair Muhammad Siddiq.
Pali	...	J. Gray, Esq.
French	...	Rev. Fr. V. de Campigneulles, S. J.
Armenian	...	T. Stephen, Esq.
Bengali	...	Babu Saradacharan Mitra, M. A., B. L

B. A.

English	...	K. Deighton, Esq., M. A. C. R. Wilson, Esq., M. A.
Philosophy	...	Babu Kalicharan Banerjee, M. A. Rev. H Whitehead, M. A.
History	...	H. M Percival, Esq , M. A.
Mathematics	...	W. Booth, Esq , M A. Babu Asutosh Mukhopadhyay, M. A., F. R. A. S., F. R. S. E.
Physics	...	P. Bruhl, Esq.
Chemistry	...	Rai Taraprasanna Ray, Bahadur, F. C S. W McMillan, Esq.
Greek	...	C. H. Tawney, Esq., M. A., C. I. E.
Latin	...	F. J. Rowe, Esq., M. A.
Sanskrit	...	Pandit Haraprasad Sastri, M. A. Babu Rajendrachandra Sastri, M. A.
Arabic	...	Col. H. S. Jarrett.

Persian	Maulavi Abul Khair Muhammad Siddiq, M.A.
French	Miss Adams.

M. A.

English	K. Deighton, Esq., M. A. M J White, Esq., M. A.
Philosophy	Babu Kalicharan Banerjee, M. A. G. Thibaut, Esq., M. A, Ph. D.
Mathematics	W. Booth, Esq, M A Babu Asutosh Mukhopadhyay, M. A., F R A S, F. R. S. E.
Physics	J. Eliot, Esq., M A. A. Macdonell, Esq., M. A.
Chemistry	Rai Taraprasanna Ray, Bahadur, F. C. S. W. McMillan, Esq.
Sanskrit	Mahamahopadhyay Chandrakanta Tarkalankar Babu Krishnakamal Bhattacharyya B.A Babu Nilmani Mukerjee, M A.
Persian	Col. H. S. Jarrett. Shams-ul-Ulama Shaik Mahmud. Gilani.
Latin	F. J. Rowe, Esq, M. A. W. T. Webb, Esq., M. A.

28. The following gentlemen were appointed a Committee under Rule 8 of the Rules for election to the Gilchrist Scholarships :—

C. H. Tawney, Esq, M. A., C. I. E.
The Hon'ble Mr. Justice Ameer Ali, C. I. E
A. M. Nash, Esq., M. A.

29. Read the resolution of the Syndicate passed at their meeting held on the 11th April, recommending to the Senate that every candidate who has failed at any Medical Examination be required before re-admission to examination to produce evidence that he has received satisfactory and regular instruction at a Medical School recognised by the University in the subject or subjects in which he has been rejected.

RESOLVED—

That the Syndicate recommend to the Senate :—

(1). That the following words be added at the end of paras. 4, 10, and 18 of the Regulations for a Licence in Medicine and Surgery, and at the end of paras. 4, 10, and 15 of the Regulations for the Degree of Bachelor in Medicine :—

" provided he produces a certificate that he has, since the date of the last examination at which he presented

himself, attended a regular course of instruction* in the subject or subjects in which he failed at that examination."

(2). That the following foot-notes be added to the same paragraphs to define the meaning of the term "a regular course of instruction":—

(a). To para. 4 of the L. M. S. Regulations, and to para. 4 of the M. B. Regulations :—

"* A regular course of instruction means attendance at one complete course of lectures, or in the case of Practical Chemistry, of Practical Chemical Exercises, as defined in para. 2."

(b). To para. 10 of the L. M. S. Regulations and to para. 10 of the M. B. Regulations :—

"* A regular course of instruction means attendance at one complete course of lectures, as defined in para. 8."

(c). To para. 18 of the L. M. S. Regulations :—

"* A regular course of instruction in Medicine or Surgery means six months' attendance at a recognised hospital: in Midwifery, six months' attendance at an obstetric hospital, and presence at six Labours: in other subjects, attendance at one course of lectures, as defined in para. 16."

(d). To para. 15 of the M. B. Regulations :—

"* A regular course of instruction in Medicine or Surgery means six months' attendance at a recognised hospital: in Midwifery, six months' attendance at an obstetric hospital, and presence at six Labours: in other subjects, attendance at one course of lectures, as defined in para. 13.

A candidate who has obtained the Licence in Medicine and Surgery, and who has been attached to a hospital or dispensary for six months since the date of his last appearance at the Second M. B examination, will be held to have attended a regular course of instruction.

30. Read the revised Regulations for the Honour Examination in Engineering.

RESOLVED—

That the Faculty of Engineering be requested to reconsider the revised Regulations.

31. The Registrar requested permission to omit from the Calendar all the Examination Papers which are now published in a separate volume; and also to invite tenders for printing the University publications.

RESOLVED—

That in future the Examination Papers be not published in the Calendar.

RESOLVED ALSO—

That the Registrar be authorised to make the necessary arrangements for printing the University publications.

32. Read an application from Janendrabhushan Lahiri, forwarding his B. A. Diploma and requesting that the mistake therein made in writing out his name may be corrected.

ORDERED—

That the mistake be corrected.

33. Read a petition from Nrityagopal Kumar, a candidate who failed in Jurisprudence only at the recent B. L. examination.

RESOLVED—

That the Syndicate are unable to interfere in the matter.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 3.

THE 20TH JUNE, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.
Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
BABU MOHINIMOHAN RAY.
A. M. NASH, ESQ.
DR. E. A. BIRCH.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.
BABU ASUTOSH MUKHOPADHYAY, F. R. A S., F. R. S. E.

34. The minutes of the meeting of the Syndicate held on the 9th May, were read and confirmed.

35. Read the minutes of the Faculty of Law, dated the 8th May.

The Registrar stated that, in anticipation of the orders of the Syndicate, he had published the following advertisement in the leading newspapers of Calcutta, Allahabad, Bombay, and Madras, and had forwarded copies of the advertisement to the Sub-Treasurers of the four Inns of Court, asking them to make the matter known among the members of their respective Inns in such a manner as they deem advisable, and also to the Registrars of the Universities of Oxford, Cambridge and London :—

CALCUTTA UNIVERSITY.

NOTICE.

The Senate will proceed, in the month of August, 1892, to the election of a Tagore Professor of Law for the term of one year, to commence on the 1st of November, 1892.

The salary of the Professorship is Rs. 10,000 per annum, and the Professor will be expected to deliver a course of not less than twelve lectures on one of the following subjects :—

(1) The law of Estoppel in British India.

(2). The law relating to joint property and partition in British India.

(3). The law relating to fraud, misrepresentation, and mistake in British India.

Candidates for the Professorship are requested to forward their applications to the Registrar on or before the 1st May, 1892, stating on which of the abovenamed three subjects they are prepared to lecture. Each candidate will forward with his application one hundred copies of a brief synopsis of his proposed lectures, and, if he so pleases, the same number of copies of his introductory lecture.

The Professor will be expected to commence his lectures in November, 1892, and to complete the delivery thereof in the following January. He will be further required to send to the Registrar a complete manuscript copy of his lectures within five months from the commencement of the delivery thereof.

RESOLVED—

That the action of the Registrar be approved.

RESOLVED ALSO—

That Act XL of 1858 (the Guardianship Act and Act XXVII of 1860 (the Certificate Act) be omitted from the list of subjects to be read for the B. L. Examination, 1891 (Calendar for 1891 p. 186) and that Act VIII of 1890 and Act VII of 1889, be inserted in their place.

36. Read the following report of the Board of Examiners for the M. D. Examination :—

"FROM

THE BOARD OF EXAMINERS FOR
THE M. D. EXAMINATION,

To

THE REGISTRAR, CALCUTTA UNIVERSITY.

Dated the 18th June, 1891.

SIR,

We have the honour to report for the approval of the Vice-Chancellor and Syndicate, the result of the M.D. Examination.

After carefully examining Suresprasad Sarbadhikari, we consider him worthy to receive the degree of Doctor of Medicine.

We have &c.,

(Sd.) EDWARD A. BIRCH, M.D.,
President of the Faculty of Medicine.

(,,) C. H. JOUBERT, M. B.
(,,) W. J. SIMPSON.
(,,) K. McLEOD.
(,,) J. F. P. McCONNELL."

RESOLVED—

That the Report be adopted and the name of the successful candidate be published in the *Gazette*.

37. On a reference from the Board of Examiners for the M. B. Examinations it was

RESOLVED—

That the combined Preliminary Scientific and First M. B. Examination is to be considered as two examinations, and that all the rules which apply to the two separate examinations apply also to the two parts of the combined examination.

38. The Registrar submitted the following statement of the result of the F. E. Examination.

The number of candidates registered for the F. E. Examination was 12, of whom 4 passed, and 8 failed. All the successful candidates were placed in the second division.

ORDERED—

That the names of the successful candidates be published in the *Gazette*.

The following are the names of the successful candidates :—

Second Division.

(In order of merit.)

1 Ahindrachandra Mukhopadhyay, C. E. College.
2 Amulyakrishna Bhattacharyya. ,,
3 Gopalchandra Dhar. ,,
4 Mahendrachandra Bandyopadhyay. ,,

39. On the result of the Entrance Examination, the Dwarkanath Scholarship was awarded to Matilal Gangopadhyay, of the South Suburban School.

40. Read a letter from the Principal, Victoria College, Cooch Behar, forwarding an application from the intending B. A. candidates from his College, praying that Cooch Behar may be appointed a centre for holding the B. A. Examination.

RESOLVED—

That the Syndicate regret that they are unable to add Cooch Behar to the list of centres for holding the B. A. Examination.

41. Read a letter from the Director of Public Instruction, Burma, recommending that Mandalay and Bassein may be appointed centres for holding the Entrance Examination.

RESOLVED—

That the Syndicate regret that they are unable to add. Mandalay and Bassein to the list of centres for holding the Entrance examination.

42. Read an application from Cyril Vethecan, requesting permission to appear at the F. A. examination without passing the Entrance examination, on the ground of his having passed the Senior Local examination of the Cambridge University.

RESOLVED—

That the Syndicate recommend to the Senate that Cyril Vethecan be admitted to the F. A. examination without passing the Entrance examination provided he satisfies the other requirements of the University.

43. Read a letter from Mr. T. D. Thomas, requesting to be informed whether a candidate who has passed the LL. B. Examination of the London University will be admitted to the B. L. and D. L. examinations of this University.

RESOLVED—

That the Syndicate are unable to admit Mr. Thomas to the B. L. examination, as the requirements of the London University with regard to legal training and preliminary examinations in Arts differ from those of this University.

44. Read an application from T. K. Morgum, B. A., supported by a written permission from the Registrar of the University of Madras, praying that he may be admitted to the B. L. examination of this University.

RESOLVED—

That T. K. Morgum be admitted to the B. L. examination.

45. Read an application from Brindabanchandra Saha, supported by an affidavit sworn before a Magistrate, praying that in his F. A. certificate the title " Saha " may be changed to " Bhaumik. "

ORDERED—

That the necessary change be made in the University records.

46. Read an application from Bansilal, supported by an affidavit sworn before a Magistrate, praying that the title "Singh" be added to the name of his son Jugulkishore in the records of this office.

RESOLVED—

That Bansilal Singh be informed that the application should be submitted by his son, Jugulkishore.

47. Read a letter from Babu Krishnakamal Bhattacharyya, stating in reply to this office letter No. 1252, date the 14th May 1891, that he is willing to accept the appointment therein referred to, provided he be not disqualified, under the rules, to set papers for the Entrance examination, by reason of his having, during February and March last, dictated translation from Sanskrit into English to the Entrance class of the Ripon Collegiate School at Howrah.

RESOLVED—

That the Syndicate are of opinion that Babu Krishnakamal Bhattacharyya is not debarred from setting the paper in Sanskrit for the Entrance examination.

48. Read an endorsement from the Principal, Ripon College, forwarding an application from Gopalchandra Mitra, praying that, under the circumstances set forth in the application, he may be permitted to appear at the B. L. examination to be held in November next.

RESOLVED—

That the Principal be informed that Gopalchandra Mitra cannot be admitted to the B. L. examination until he has attended lectures for a full year.

49. Read a letter from the Officiating Political Agent, Hill Tipperah, forwarding an application from the Minister, Tipperah State, requesting that the English School at Agortala, maintained by the Maharaja, which is not under the supervision of the Government Inspector of Schools, may be authorised to send up candidates for the Entrance examination.

RESOLVED—

That the English School at Agortala be added to the list of schools qualified to send up candidates to the Entrance examination.

50. Read a letter from the Director of Public Instruction, Assam, requesting to be informed whether, under the circumstances therein mentioned, candidates from the local Normal school may be sent up for the Entrance examination.

RESOLVED—

That the Director of Public Instruction, Assam, be informed that candidates from the Normal school will be admitted to the Entrance examination.

51. Read a letter from the Director of Public Instruction, Colombo, forwarding an application from the Principal, St. John's College, Jaffna, requesting that the college may be affiliated to this University in Arts.

RESOLVED—

That the Principal be informed that the application cannot be accepted, as it has not been countersigned by two members of the Senate.

52. Read a letter from the District Judge, Jhansi requesting that a complete set of the Tagore Law Lectures may be supplied to his Court.

RESOLVED—

That the Syndicate regret that they are unable to comply with the request.

53. Read a letter from the Director of Public Instruction, Bengal, forwarding copy of a Resolution of the Government of Bengal, No. 294, dated the 21st April 1891, on the subject of the re-organisation of the Civil Engineering College at Sibpur, for the consideration of the Syndicate, and inviting their special attention to para. 10 of the same.

RESOLVED—

That the consideration of the letter be postponed.

54. Read a letter from the Rev. T. Moscrop, Superintendent, Girls' High School, Kandy, recommending that Miss R. M. A. Marshall, who passed the Senior examination of the Cambridge University in 1890, may be admitted to the F. A. examination of 1893, without being required to pass the Entrance examination.

RESOLVED—

That the Syndicate recommend to the Senate, that Miss R. M. A. Marshall be admitted to the F. A. examination of 1893, without passing the Entrance examination.

55. Read a letter from the Comptroller and Auditor General, forwarding copy of his report on the audit of the University Accounts for the Financial year ending 31st March 1891.

ORDERED—

To be recorded.

56. The Registrar submitted a list of schools that had done badly at the last Entrance examination after they had been warned that if they did not do well at that examination they would be disqualified.

RESOLVED—

That the following schools be struck off the list of schools qualified to send up candidates to the Entrance examination:—

Arrah Kayastha Jubilee Academy.
Arrah Town School.
Aryan Training Institution, Bankipur.
Jalandhar Mission School.
Noakhali Rajkumar Jubilee School.
P. Gopinathpur School.

57. Read five endorsements from the Principal, Metropolitan Institution, forwarding applications from Munindranath Bhattacharyya, Nalinchandra Gupta, Adharchandra Mitra, Herambachandra Bandyopadhyay, and Bhabataran Sarkar, praying that, under the circumstances stated in the applications, they may be admitted to the B. L. examination to be held in November next.

RESOLVED—

That the Principal be informed that the candidates will be admitted to the examination to be held in November next, on the production of certificates that they have attended 75 per cent. of the lectures delivered in the Institution from the beginning of the present session till the date of the examination.

58. Read three endorsements from the Principal Ripon College, forwarding applications from Kumudnath Chaudhuri, Indubhushan Chakrabarti, and Rasikbihari Chakrabarti, praying that, under the circumstances stated in the applications, they may be admitted to the B. L. examination to be held in November next.

RESOLVED—

That the Principal be informed that the candidates cannot be admitted to the B. L. examination till they have attended lectures for a full year.

59. The following contingent bills for the months of April and May were passed :—

ACCOUNT FEE FUND.	Rs	As.	P.	Rs	As.	P.
Messrs. Thacker, Spink & Co., Commission on the University Publications	681	14	0			
3 Bills, Superintendent, Catholic Orphan Press, for Miscellaneous Printing Work ..	707	2	0			
2 Bills, Messrs. Thacker, Spink & Co., for Prize Books, &c., &c.	110	8	0			
1 Bill, Messrs. Thacker, Spink & Co., Subscription	12	0	0			
1 Bill, Do. do., for Directory, 1891	20	0	0			
1 ,, Freight, &c., &c.	38	12	6			
1 ,, Chaturbhuj Patnaik, Examination Expenses	6	11	9			
1 Bill, Principal, Dacca College, Examination Expenses	12	0	0			
1 Bill, Jagadischandra Sen, Examination Expenses	3	4	0			
1 Bill, Abinaschandra Bose, Examination Expenses	9	0	0			
1 Bill, W. H. Wood, Examination Expenses ...	5	8	0			
1 ,, A. P. Begg, do. do. ...	19	12	6			
1 ,, Expenses incurred during the Examination held a Shillong	14	5	0			
1 Bill, Expenses incurred during the Examination held at Nagpur	114	2	3			
1 Bill, Expenses incurred during the Examination held at Dhubri	18	14	9			
2 Bills, W. H. Jobbins, Examination Expenses	20	12	0			
1 Bill, Messrs. Newman & Co., for India Rubber Scraper	5	8	0			
1 Bill, S. C. Addy, for a packet of soap ...	3	12	0			
1 ,, Secretary to the Government of Bengal, P. W. D., for making additional rooms in the Senate House	9,144	0	0			
1 Bill, Superintendent, Baptist Mission Press, for Miscellaneous Printing Work .	297	0	6			
1 Bill, Hemendranath Mitra, Examination Expenses	13	8	0			
1 Bill, J. Callarman, for Rubber Stamp ...	12	0	0			
1 ,, Contingencies	7	0	0	11,277	7	3
ACCOUNT, SONAMANI FUND.						
1 Bill, Prize Books	.....			36	10	10
ACCOUNT, SARADAPRASAD FUND.						
1 Bill, Prize Books	.....			25	0	0
TOTAL, Rs ...	.....			11,339	2	1

60. The following Entrance remuneration bill was passed :—

Names.	Subjects.	Fee for setting.	Fee for examining answer papers.	Fee for re-examining answer papers.	Fee for translating 2nd English paper.	Head Examiner's Fee.	Total.	Income Tax.	Fine.	Net Amount.
		Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.
G. S. Gasper, Esq. ...	English	.....	194 4 0	...	... ..	...	194 4 0	5 11 0	...	188 9 0
J. N. Dasgupta, Esq. .	English	.....	466 8 0	..	.....	...	466 8 0	12 2 4	...	454 5 8
Babu Jagadischandra Sen	English	.....	467 4 0	...	.....	...	467 4 0	12 2 8	32 0 0	423 1 4
G. W. Kuchler, Esq ...	Mathematics	25 0 0	.....	...	.. ...	...	25 0 0	0 10 5	...	24 5 7
H. Stephen, Esq. ...	Latin ...	25 0 0	132 12 0	...	.....	...	157 12 0	4 1 8	...	153 10 4
Major J. H. Sadler ...	Arabic & Persian	25 0 0	.....	...	.....	...	25 0 0	0 10 5	...	24 5 7
Col. H. S. Jarrett	Arabic & Persian	.....	... .	...	.....	...	12 8 0	0 5 2	...	12 2 10
Maulavi Mearajuddin Ahmad	Urdu.	.....	245 0 0	...	.....	..	245 0 0	6 6 1	...	238 9 11
Maulavi Shams-ul Huda...	Urdu.	25 0 0	171 2 0	...	25 0 0	...	221 2 0	5 12 1	16 0 0	199 5 11
Babu Kanailal Sastri ...	Hindi ...	25 0 0	289 2 0	...	25 0 0	...	339 2 0	8 13 3	...	330 4 9
A. W. Lonsdale, Esq ...	Burmese ...	25 0 0	88 0 0	...	25 0 0	...	138 0 0	3 9 6	..	134 6 6
R. Dhanasukati, Esq. ...	Tamil ...	25 0 0	5 8 0	...	25 0 0	...	55 8 0	1 7 1	...	54 0 11
Carried over ..	.....	175 0 0	2,059 8 0	...	100 0 0	...	2,347 0 0	61 11 8	48 0 0	2,237 4 4

NAMES.	Subjects.	Fee for setting.	Fee for examining answer papers.	Fee for re-examining answer papers.	Fee for translating 2nd English paper.	Head Examiner's Fee.	Total.	Income Tax.	Fine.	Net Amount.
		Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.
Brought forward ...	.....	175 0 0	2,059 8 0	...	100 0 0	...	2,347 0 0	61 11 8	48 0 0	2,237 4 4
J. Gray, Esq	Pali ..	25 0 0	.....	...	.....	...	25 0 0	0 10 5	...	24 5 7
Rai. Gunabhiram Sarma Barua, Bahadur ...	Assami ...	.....	21 14 0	...	25 0 0	...	46 14 0	1 3 6	...	45 10 6
Mr. Dhamabhoi Dayabhai Mehta	Gujratti ..	.....	12 8 0	...	25 0 0	...	37 8 0	.....	...	37 8 0
Rev. J. Roberts	Khasi ...	.....	.....	...	25 0 0	...	25 0 0	0 10 5	...	24 5 7
Babu Kedarnath Chatterjee	Parbatia ...	.....	1 4 0	...	25 0 0	...	26 4 0	0 10 11	...	25 9 1.
Mr. Mahadeo Yeshwant Dole	Mahrathi ...	.....	95 10 0	...	25 0 0	...	120 10 0	3 2 3	...	117 7 9
E. Ormond, Esq.... ...	History and Geography.	50 0 0	.....	...	.....	...	50 0 0	1 4 10	...	48 11 2
Babu Kumudinikanta Banerjee		.....	388 2 0	...	.....	...	388 2 0	10 1 8	...	378 0 4
Babu Syamaprasanna Majumdar		.....	471 0 0	...	.....	...	471 0 0	12 4 3	48 0 0	410 11 9
TOTAL, Rs ..	.....	250 0 0	3,049 14 0	...	225 0 0	...	3,537 6 0	91 11 11	96 0 0	3,349 10 1

61. The following F. A. remuneration bill was passed :—

Names.	Subjects.	Fee for setting.	Fee for examining answer papers	Total.	Income Tax.	Net Amount.
		Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.
F. J. Rowe, Esq. ...	English.	.....	772 0 0	772 0 0	20 1 8	751 14 4
H. A. Bamford, Esq. ...		.....	827 0 0	827 0 0	21 8 7	805 7 5
Babu Asutosh Mukerjee ...		.....	814 0 0	814 0 0	21 3 2	792 12 10
„ Nilkanta Majumdar ...		.....	814 0 0	814 0 0	21 3 2	792 12 10
G. W. Kuchler, Esq. ...	Mathematics.	40 0 0	.. ...	40 0 0	1 0 8	38 15 4
Babu Gaurisankar De ...		.....	711 0 0	711 0 0	18 8 3	692 7 9
„ Mahendranath Ray ...		.....	738 0 0	738 0 0	19 3 6	718 12 6
J. H Gilliland, Esq. ...		.....	711 0 0	711 0 0	18 8 3	692 7 9
C. Little, Esq. ...		... ..	738 0 0	738 0 0	19 3 6	718 12 6
W. E. K. Shore, Esq. ...		.....	724 0 0	724 0 0	18 13 8	705 2 4
Babu Kailashchandra Dutta ...	Sanskrit.	.....	588 0 0	588 0 0	15 5 0	572 11 0
„ Haridas Sastri ...		.....	635 0 0	635 0 0	16 8 7	618 7 5
„ Bidhubhushan Goswami ...		.....	627 0 0	627 0 0	13 1 0	613 15 0
„ Bireswar Chatterjee ...		.....	595 0 0	595 0 0	15 7 11	579 8 1
„ Kaliprasanna Bhattacharyya ...		.....	586 0 0	586 0 0	15 4 2	570 11 10
Carried over ..	.....	40 0 0	9,880 0 0	9,920 0 0	255 1 1	9,664 14 11

NAMES	Subjects.	Fee for setting.	Fee for examining answer papers.	Total.	Income Tax.	Net Amount.
		Rs. As. P.	Rs. As P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
Brought forward	... ..	40 0 0	9,880 0 0	9,920 0 0	255 1 1	9,664 14 11
Major J. H. Sadler	Arabic and Persian.	40 0 0	.....	40 0 0	1 0 8	38 15 4
Col H. S. Jarrett		... ..	364 0 0	364 0 0	9 7 8	354 8 4
Maulavi Abul Khair Md. Siddiq ...		40 0 0	.....	40 0 0	1 0 8	38 15 4
H. Stephen, Esq.	Latin.	40 0 0	37 0 0	77 0 0	2 0 1	74 15 11
J. Gray, Esq.	Pali.	80 0 0	12 0 0	92 0 0	2 6 4	89 9 8
J. Eliot, Esq.	Physics.	80 0 0	...	80 0 0	2 1 4	77 14 8
A. Macdonell, Esq.		.. ...	646 0 0	646 0 0	16 13 2	629 2 10
P. Bruhl, Esq.		.....	669 0 0	669 0 0	17 6 9	651 9 3
W. H. Wood, Esq.		. ...	1,028 0 0	1,028 0 0	26 12 4	1,001 3 8
Dr. C. J. H. Warden	Chemistry.	40 0 0	... .	40 0 0	1 0 8	38 15 4
A. Pedler, Esq.		.....	485 0 0	485 0 0	12 10 1	472 5 11
Dr. P. C. Ray		.....	460 0 0	460 0 0	11 15 8	448 0 4
Dr. D. Prain	Botany.	80 0 0	12 0 0	92 0 0	2 6 4	89 9 8
E. W. Ormond, Esq.	History.	40 0 0	.....	40 0 0	1 0 8	38 15 4
Rev J. P. Ashton		.....	648 0 0	648 0 0	16 14 0	631 2 0
N. N. Ghose, Esq.		.....	655 0 0	655 0 0	17 0 11	637 15 1
Babu Kalisankar Sukul ...			670 0 0	670 0 0	17 7 2	652 8 10
,, Kalicharan Banerjee ...	Logic.	40 0 0	.....	40 0 0	1 0 8	38 15 4
H. R. James, Esq.		.....	663 0 0	663 0 0	17 4 3	645 11 9
Babu Brajendranath Sil		.....	657 0 0	657 0 0	17 1 9	639 14 3
TOTAL, Rs ...	.....	520 0 0	16,886 0 0	17,406 0 0	450 0 3	16,955 15 9

62. The following B. A. remuneration bill was passed :—

Names.	Subjects.	Fee for setting. Pass.	Fee for setting. Honours.	Fee for examining answer papers. Pass.	Fee for examining answer papers. Honours.	Total.	Income Tax.	Net Amount.
		Rs A. P.	Rs A. P.	Rs A. P	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.
W. T. Webb, Esq. ...	English.	.....	.....	.....	768 0 0	768 0 0	20 0 0	748 0 0
H. M. Percival, Esq. ...	English.	.....	.....	1,068 12 0	.....	1,068 12 0	27 13 3	1,040 14 9
J. Mann, Esq. ...	English.	.....	.....	1,067 8 0	.....	1,067 8 0	27 12 9	1,039 11 3
Dr. D. Duncan ...	Philosophy.	60 0 0	240 0 0	.....	102 0 0	402 0 0	10 7 6	391 8 6
Babu Kali Ch. Banerjee ...	Philosophy.	60 0 0	160 0 0	863 12 0	102 0 0	1,185 12 0	30 14 0	1,154 14 0
H. Stephen, Esq. ...	Latin.	60 0 0	.....	1 4 0	.....	61 4 0	1 9 6	59 10 6
Babu Rajendra Ch. Sastri ...	Sanskrit.	60 0 0	160 0 0	501 4 0	140 0 0	861 4 0	22 6 10	838 13 2
Major J. H. Sadler ...	Arabic and Persian.	60 0 0	.....	.....	.....	60 0 0	1 9 0	58 7 0
Maulávi Abul Khair Md. Siddiq ...	Arabic and Persian.	60 0 0	160 0 0	.....	.....	220 0 0	5 11 8	214 4 4
Col. H. S. Jarrett ..	Arabic and Persian.	60 0 0	160 0 0	82 8 0	.....	302 8 0	7 14 0	294 10 0
E. W. Ormond, Esq. ...	History.	120 0 0	320 0 0	355 0 0	40 0 0	835 0 0	21 11 11	813 4 1
G. W. Kuchler, Esq. ...	Mathematics	60 0 0	160 0 0	297 8 0	200 0 0	717 8 0	18 10 11	698 13 1
J. Eliot, Esq. ...	Physics.	120 0 0	160 0 0	228 12 0	100 0 0	608 12 0	15 13 7	592 14 5
Dr. C. J. H. Warden ...	Chemistry.	120 0 0	160 0 0	.....	.....	280 0 0	7 4 8	272 11 4
W. MacMillan, Esq. ...	Chemistry.	.....	.....	125 0 0	100 0 0	225 0 0	5 13 9	219 2 3
Dr. D. Prain ...	Botany.	60 0 0	.....	.....	.....	60 0 0	1 9 0	58 7 0
J. Wood-Mason, Esq. ...	Physiology & Zoology.	120 0 0	.....	.....	.....	120 0 0	3 2 0	116 14 0
Total, Rs ...	.....	1,020 0 0	1,680 0 0	4,591 4 0	1,552 0 0	8,843 4 0	230 4 4	8,612 15 8

63. The following Preliminary Scientific M. B. remuneration bill was passed :—

NAMES.	Subjects.	Fee for setting.	Fee for examining written papers.	Fee for oral and practical examination.	Total.	Income Tax.	Net Amount.
		Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.
Rai Kanailal De, Bahadur ...	Chemistry.	60 0 0	70 0 0	330 0 0	460 0 0	11 15 8	448 0 4
Dr. D. Prain	Botany.	60 0 0	70 0 0	170 0 0	300 0 0	7 13 0	292 3 0
J. Wood-Mason, Esq. ...	Comp. Anatomy	60 0 0	68 0 0	160 0 0	288 0 0	7 8 0	280 8 0
TOTAL ...	.....	180 0 0	208 0 0	660 0 0	1,048 0 0	27 4 8	1,020 11 4

64. The following Combined Preliminary Scientific M. B. remuneration bill was passed :—

NAMES.	Subjects	Fee for setting.	Fee for examining written papers.	Fee for oral and practical examination.	Total.	Income Tax.	Net Amount.
		Rs As. P.	Rs As P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P
Rai Kanailal De, Bahadur ...	Chemistry.	.....	16 0 0	80 0 0	96 0 0	2 8 0	93 8 0
Dr. D. Prain	Botany	.....	16 0 0	40 0 0	56 0 0	1 7 4	54 8 8
J. Wood-Mason, Esq.... ...	Comp. Anatomy	.....	16 0 0	40 0 0	56 0 0	1 7 4	54 8 8
J. R Adie, Esq.	Physiology	60 0 0	16 0 0	40 0 0	116 0 0	3 0 4	112 15 8
Dr. K McLeod	Anatomy	60 0 0	16 0 0	80 0 0	156 0 0	4 1 0	151 15 0
Rai Lalmadhab Mukerjee, Bahadur	Mat. Medica ...	60 0 0	16 0 0	80 0 0	156 0 0	4 1 0	151 15 0
TOTAL ...	...	180 0 0	96 0 0	360 0 0	636 0 0	16 9 0	619 7 0

65. The following First M. B. remuneration bill was passed :—

NAMES.	Subjects	Fee for setting.	Fee for examining written papers.	Fee for oral and practical examination.	Total.	Income Tax.	Net Amount
		Rs. As. P.	Rs. As. P	Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As. P.
J. R. Adie, Esq.	Physiology ...	.....	4 0 0	10 0 0	14 0 0	0 5 10	13 10 2
Dr K. McLeod	Anatomy ...	.....	4 0 0	20 0 0	24 0 0	0 10 0	23 6 0
Rai Lalmadhab Mukerjee, Bahadur ...	Materia Medica	.....	4 0 0	20 0 0	24 0 0	0 10 0	23 6 0
TOTAL, Rs ...	.....	.....	12 0 0	50 0 0	62 0 0	1 9 10	60 6 2

66. The following Second M. B. remuneration bill was passed :—

NAMES.	Subjects.	Fee for setting.	Fee for examining written papers.	Fee for oral and practical examination.	Total.	Income Tax	Net Amount.
		Rs. As. P.	Rs. As. P.	Rs. As. P.	Rs. As P	Rs. As. P.	Rs. As. P.
Dr. S. Mukerjee	Medl. Juris, ...	80 0 0	18 0 0	30 0 0	128 0 0	3 5 4	124 10 8
Dr J. B. Gibbons	Medicine ...	80 0 0	18 0 0	60 0 0	158 0 0	4 1 10	153 14 2
Dr. O'C. Raye	Surgery ...	80 0 0	18 0 0	60 0 0	158 0 0	4 1 10	153 14 2
Babu Doyalchandra Som ...	Midwifery ...	80 0 0	18 0 0	60 0 0	158 0 0	4 1 10	153 14 2
Dr. J. F. P. McConnell ...	Pathology ...	80 0 0	18 0 0	60 0 0	158 0 0	4 1 10	153 14 2
Dr. W. J. Simpson	Hygiene ...	80 0 0	18 0 0	30 0 0	128 0 0	3 5 4	124 10 8
TOTAL, Rs ...	.....	480 0 0	108 0 0	300 0 0	888 0 0	23 2 0	864 14 0

67. The following M. D. remuneration bill was passed :—

Names.	Subjects.	Fee for setting.	Fee for examining written papers.	Fee for oral and practical examination	Total.	Income Tax.	Net Amount.
		Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P	Rs As. P.
Dr. Edward A. Birch	Medicine ...	100 0 0	5 0 0	10 0 0	115 0 0	2 15 11	112 0 1
Dr. K. McLeod	Surgery ...	100 0 0	5 0 0	10 0 0	115 0 0	2 15 11	112 0 1
Dr. C. H. Joubert	Midwifery ...	100 0 0	5 0 0	10 0 0	115 0 0	2 15 11	112 0 1
Dr. J. F. P. McConnell	Pathology ...	100 0 0	5 0 0	10 0 0	115 0 0	2 15 11	112 0 1
Dr. W. J. Simpson	Hygiene ...	100 0 0	5 0 0	10 0 0	115 0 0	2 15 11	112 0 1
Total, Rs ...	.....	500 0 0	25 0 0	50 0 0	575 0 0	14 15 7	560 0 5

68 The following F. E. remuneration bill was passed :—

NAMES.	Subjects.	Fee for setting.	Fee for examining written papers.	Fee for examining Projects, Designs and Drawings.	Total.	Income Tax.	Net Amount.
		Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.	Rs As. P.
C. Little, Esq.	Mathematics.	300 0 0	90 0 0	.....	390 0 0	10 2 6	379 13 6
W. Banks Gwyther, Esq. ...	Enginrg.	60 0 0	18 0 0	.....	78 0 0	2 0 6	75 15 6
G C. Stawell, Esq. ...	Enginrg.	60 0 0	18 0 0	.....	78 0 0	2 0 6	75 15 6
A. Pedler, Esq.	Science.	180 0 0	54 0 0	.....	234 0 0	6 1 6	227 14 6
Major C. D. McArthur ..	Drawing.	60 0 0	18 0 0	.....	78 0 0	2 0 6	75 15 6
S. F. Downing, Esq. ...	Practical Drawing.	.....	.....	72 0 0	72 0 0	1 14 0	70 2 0
J. S. Slater, Esq.	Practical Drawing.	.....	.....	72 0 0	72 0 0	1 14 0	70 2 0
TOTAL, Rs ...	.....	660 0 0	198 0 0	144 0 0	1,002 0 0	26 1 6	975 14 6

(Confirmed)

GOOROO DASS BANERJEE,
Vice Chancellor.

A. M. NASH,
Registrar.

MINUTES OF THE SENATE

FOR THE YEAR 1891-92.

No. 2.

THE 27TH JUNE, 1891.

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D L.,
Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
RAI JAGADANANDA MUKERJEE, BAHADUR.
BABU GAURDAS BASAK.
BABU UMESHCHANDRA DUTT.
THE HON'BLE MR. JUSTICE AMEER ALI, C. I. E.
MAHAMAHOPADHYAY MAHESACHANDRA NYAYARATNA, C. I. E.
THE VERY REV. FATHER E. LAFONT, S. J., C. I E.
BABU KALICHARAN BANERJEE.
A. F. RUDOLF HOERNLE, ESQ., Ph. D.
A. M. NASH, ESQ.
BABU KRISHNABIHARI SEN.
REV. DR. K. S. MACDONALD.
BABU RADHIKAPRASAD MUKERJEE.
RAI LALMADHUB MUKERJEE, BAHADUR.
DR. E. A. BIRCH.
BABU GAURISANKAR DE.
RAJA PIYARIMOHAN MUKERJEE, C. S. I.
BABU DEBENDRANATH RAY.
MANMOHAN GHOSE, ESQ.
RAI RADHIKAPRASANNA MUKERJEE, BAHADUR.
BABU ISANCHANDRA BASU.
BABU NILMANI MUKERJEE.
DR. C. J. H. WARDEN.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.
BABU HARAPRASAD SASTRI.
BABU UMESHCHANDRA DATTA.
BABU RAJANINATH RAY.
SHAMS-UL-ULAMA SHAIKH MAHMUD GILANI.
BABU SRINATH DAS.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R S. E.
REV. H. WHITEHEAD.
MAHARAJA BAHADUR SIR NARENDRAKRISHNA, K. C. I. E.
BABU SYAMACHARAN GANGULI.
RAI GUNABHIRAM SARMA BARUYA, BAHADUR.
BABU JOGINDRACHANDRA GHOSH.
BABU MAHENDRANATH RAY.

69. The Vice-Chancellor said that the meeting had been convened in accordance with a requisition signed by several members of the Senate, which had been circulated, and the business before them was to consider that requisition.

Maharaja Bahadur Sir Narendrakrishna said that it gave him great pleasure to lay before them the case of Nrityagopal Kumar, who offered himself as a

candidate for the last B. L. examination. He was examined in the branches of Law prescribed by the University and gave satisfactory answers to the questions mentioned in the law papers, except that he failed to secure the minimum number of marks in the Jurisprudence paper—namely, 33 ; he having failed by one mark. He succeeded in getting more than 300 marks out of the 600 fixed, and the loss of one mark in the Jurisprudence paper unfortunately debarred him from passing creditably in the second division for the B. L. degree. All would admit that this student had acquired a competent knowledge of Indian law, and he therefore earnestly entreated the Senate to recommend to the Syndicate to allow him the grace mark, an indulgence which he believed, had been granted to five students in the year, 1889, who had failed by one mark to obtain this degree.

The Revd. Dr. K. S. Macdonald enquired whether this question had been considered by the Syndicate.

The Vice-Chancellor said that the question had been considered by the Syndicate and they did not find their way to interfere.

Maharaja Bahadur Sir Narendrakrishna moved that considering the circumstances of the case of Nrityagopal Kumar, the Senate request the Syndicate to refer it again to the examiners for their favourable consideration.

The Very Rev. Father Lafont said that he could not say he had much pleasure in seconding the resolution. Unless some circumstances of the case had been withheld from the public, he did not understand how such a cast could ever have come before them. Under the Regulations the Moderators and Registrar were empowered to pass, under their own authority, candidates who failed to obtain by one mark the minimum. Once the principle of grace marks admitted, he thought the circumstances of this case ought to have suggested themselves to them and have prompted them to allow the grace mark in the one subject in which the student had failed. This was not a question of an exact science like mathematics, but the failure was in an abstruse subject like jurisprudence. He also understood that the examiner, Mr. Graham, had expressed the opinion, that if the matter rested only with him he was quite willing to give the mark wanted.

Babu Jogindrachandra Ghosh moved, as an amendment, that the Senate be requested to consider the case of

Nrityagopal Kumar and other similar cases in the F. A. and Law examinations in which candidates had been plucked for one mark only, and to pass them if they thought fit in consultation with the Moderators and examiners. He knew that there were many other cases besides the present one in which candidates had been plucked for one mark, and it was not proper for them to consider only this case and it was but right to refer all these cases to the Syndicate for reconsideration in consultation with the examiners. He said that he was informed that in the First Arts examination grace marks had been allowed in English and other subjects, but not in Sanskrit. Similarly in the Entrance examination while grace marks had been allowed in the other subjects, candidates who were plucked for one mark only in History met with no consideration. This was not the first time the Senate had taken into consideration the results of examinations.

Babu Debendranath Ray seconded the amendment.

The Rev. Mr. Whitehead opposed the amendment on the general ground that it was highly undesirable that any questions of this kind should ever come before the Senate at all. They had appointed a number of gentlemen of great ability and great fairness who had absolutely no personal predilections in favour of any of the candidates or of acting unjustly towards any one of them, and if they were to trust them to conduct examinations they must trust their decision ; and if not, it was time the University ceased its functions altogether. The amendment seemed to supply the most conclusive argument which could be offered against the original proposal, because it showed that if they once admitted appeals of this kind they would not be limited to these particular cases, and that they would be received in innumerable other cases when students thought they had been unjustly dealt with by examiners. In this case they had no material before them to judge. The very fact that the grace mark was withheld in this case was strong proof that the examiners had some very strong reasons for withholding the grace mark.

Babu Asutosh Mukerjee opposed the amendment on the ground that though it was put as an amendment it was really a substantive proposition. It dealt with the question of giving grace marks indiscriminately. That

was not the question before the Senate, and therefore they had no right to consider it.

Rai Lalmadhub Mukerjee, Bahadur, was in favour of the original resolution.

Mr. Nash thought it right to explain some of the facts of the case. He was present at the meeting when the marks were considered, and the case of Nrityagopal Kumar did not escape the attention of the examiners. The President of the Faculty of Law was present as President of the Board of Examiners. Two other similar cases were before the examiners, and he pointed out that they were at liberty to give grace marks if they chose. The President of the Board of Examiners objected to giving the grace marks, and the question was referred to the examiner himself, Mr. Graham, who said—and he was quoting almost exactly Mr. Graham's words—" I have been very lenient in examining the candidates, and if they have not passed in my paper they don't deserve to." In consequence of that the grace mark was refused. The question was discussed; the examiners deliberately refused to give the grace mark. Under these circumstances, and in reference to article 14 of the Act, he did not think either the Senate or Syndicate, or any one else, had any power to interfere with the action of the examiners after they had submitted their report. With reference to the powers of the Moderators, there was a doubt whether the rules on page 106 of the Calendar referred to degree examinations, because article 14 of the Act of Incorporation said that examiners were to decide everything in regard to examinations, and therefore it was doubtful whether the Moderators had any right whatever to interfere with the examinations, as they had the right to do in the case of the Entrance and F. A. examinations. In reply to the mover of the amendment he stated that in both the Entrance and the First Arts examinations the Moderators had refused to give grace marks, or had given a smaller number of grace marks, in those subjects in which the percentage of passes was very high.

Raja Piyarimohan Mukerjee said that now that they had the facts before them, it was clear that the matter had not been properly considered, inasmuch as the University rules and regulations did not recognise the voice of the examiners in these matters. This case was one of

extreme hardship, and if any thing could be done to redress it, it should be done. The student had passed creditably in all subjects, and had only failed in one, and this was exactly one of those cases which were contemplated by the rules.

Mr. Manmohan Ghose very much regretted that they had been called upon to discuss a question like this without having before them the written records of the case or the reasons which influenced the Syndicate in coming to the decision they had.

He did not hesitate to accept the explanation which had been given, but it would be more satisfactory in every case to have before them the recorded decisions of the Syndicate when they were called upon to supervise any decision which that body might arrive at. He strongly sympathised with the general principle which had been enunciated, that when they appointed a body of examiners they must have entire confidence in, and abide by, their decisions. But if they adhered to hard-and fast rules, he entirely supported Mr. Whitehead, but the University had come to the conclusion that in certain cases they should not abide by hard-and-fast rules, and one of these was allowing grace marks. Once they declared that grace marks should be given the practice should be followed, not capriciously, but with due regard to uniformity and justice. In other words, grace marks have been given before and, he took it, they must continue to be given, not arbitrarily, but upon a certain fixed principle, and in this case, not having sufficient materials to go upon, they had no alternative but to refer the matter back to the Syndicate for reconsideration by the examiners, as there was nothing before the meeting to satisfy them that proper discretion had been used by the examiners in this particular instance.

The Hon'ble Mr. Ameer Ali said that the case of the other students was not before them, and to refer the question relating to them back to that body would be casting an undeserved censure upon the Syndicate. Without materials before them it was irregular and unjust to ask the Syndicate to reconsider the case of the other students.

In reference to the particular case, he would ask what would be the position of affairs if the matter was referred back. Could the Syndicate direct the examiners to grant the one grace mark ?

The Rev. Dr. Macdonald agreed in the view, that the examiners having decided that no grace marks should be allowed, the Senate and Syndicate were unable to interfere. The matter, by the Act of Incorporation, rested entirely with the examiners. This was a question of very vital importance to the efficiency of the University and to the honour of the Senate and Syndicate. If they were to allow appeals to the Senate from every student who failed, what would the Calcutta University come to? Here they had the case of a solitary student appealing from the Moderators and examiners, and calling together a body of two hundred senators to sit in judgment upon his case. He thought this was bringing the University into contempt, and he was not disposed to give any favourable consideration to such appeals. If they admitted one there would be no end to them. He was opposed to both the original proposition and the amendment.

The Vice-Chancellor brought the debate to a close by summing up the arguments on both sides, and opposing both the original proposition and the amendment.

The amendment was then put to the vote and lost by a large majority. The original proposition was next put to the vote and declared carried, fourteen voting for, and twelve against, it.

The meeting here adjourned.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES

OF

THE FACULTY OF LAW

FOR THE YEAR 1891-92.

No. 2.

THE 29TH JUNE 1891.

Present:

THE HON'BLE MR. JUSTICE AMEER ALI, C. I E., *President, in the Chair.*

BABU KALICHARAN BANERJEE.
RAJA PIYARIMOHAN MUKERJEE, C. S. I.
BABU GOLAPCHANDRA SARKAR.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.
MAHARAJA BAHADUR SIR NARENDRA KRISHNA, K. C. I. E.
BABU JOGENDRACHANDRA GHOSH.

70. The Faculty met to consider the following Report of the Committee appointed to revise the lists of text-books for the examinations in Law :—

"We the undersigned members of a Committee appointed by the Faculty of Law to revise the lists of text-books for the examinations in Law, have the honour to submit the following Report in thatbehalf —:

1. As regards the text-books for the Honour Examination in Law, we recommend, under the head of Law of Succession, the substitution of Walker and Elgood's Law of Executors and Theobald's Law of Wills, for Williams on Executors.

2. As regards the text-books for the B. L. examination, we recommend, with the following modifications, the adoption of the scheme prepared by the Committee appointed on the 14th August 1890, which will be found in Appendix I. :—

(a) In Group 2, we recommend the addition of Chapters 2, 3, and 4, Book III., Stephen's Blackstone, and the substitution of Act VII. of 1889 (Succession Certificate) for Act. XXVII of 1860 (Certificate.)

(b) In Group 3, we recommend that Act XI. of 1859 and Act VIII. of 1885 be prescribed bodily, omitting only sections 4, 16, 40—52, and 56—62 in the former, and sections 2, 31—36, 39, 56—60, 62—64, 69—71, 76—83, 93—158, and 186—196 in the latter Act

(c) In Group 4, we recommend the addition of Chapter X. (Endowments) of Macnaghten's Principles of Mahomedan Law.

(d) In Group 5, we recommend the substitution of Pollock's Law of Torts, Chapters 1—5, 7, and 9—10, for Underhill on Torts.

(e) In Group 6, we recommend that the portions excepted from the Code of Criminal Procedure be Parts 5, 8, and Chapters 38—40, 42—43, and 46.

(f) In Group 7, we recommend the substitution of Best's Principles of the Law of Evidence, Introduction, Book I, and Book IV., for Sir Fitzjames Stephen's Introduction to the Evidence Act.

(g) In Group 8, we recommend the omission of Chapter X. of Macnaghten's Principles of Mahomedan Law We are of opinion that it is desirable to replace Macnaghten by a more modern Manual.

The scheme, thus modified, will be found in Appendix II.

AMEER ALI.
G. C. PAUL.
HEMCHANDRA BANERJI.
KALICHARAN BANURJE.
GOLAPCHANDRA SARKAR.
GONESHCHANDRA CHUNDER.

APPENDIX I.

1. The Principles of Jurisprudence; the History and Constitution of the Courts of Law and Legislative Authorities in India.	Maine's Ancient Law; Markby's Elements of Law (third edition); Student's Austin's Jurisprudence by Campbell, omitting Parts II. and III.; Cowell's Tagore Law Lectures, 1872.
2. The Law relating to Persons in their Public and Private Capacities, including the Law of Testamentary Succession.	Stephen's Blackstone, Book I. Book III. Chapter I, Book IV., Part I., Chapters 2 and 6; Act IX. of 1875 (Majority); Act VIII of 1890 (Guardians and Wards); Act IX of 1879 (B. C.). Parts I, II, and VII, Act III of 1881 (B C.) (Court of Wards); Act III of 1872 (Civil Marriage); Act X of 1865 (Succession Act) except Parts III—V, XXX, XXXI, and XXXV—XL; Act XXI of 1870 (Hindu Wills Act) except the portions of the Indian Succession Act omitted from the study of that Act; Act V of 1881 (Probate); Act XXVII of 1860 (Certificate); Mayne's Hindu Law and Usage, Chapter XI (Wills); Macnaghten's Principles of Mahomedan Law, Chapter VI (Wills).
3. The Law of Property, including the Law relating to Land Tenures and the Revenue Laws.	Stephen's Blackstone, Book II, Introduction, and Part I. Chapters 3—9, 15, 16, 20, and 23, and Book II, Part II, Chapters 1, 2, and 4; Regulations I, VIII, XIX (sections 1—7), and XXXVII (sections 1—6, 10, 12, 15) of 1793; Regulation VIII of 1819; Regulation XI of 1825; Act XI of 1859, sections 5, 9—15, 33—37; Act VII of 1880 (B. C.); Act XIX of 1873, sections 146, 150, and 166—168; Act VIII of 1885, sections 3—12, 18—30, 37, 38, 40—44, 48, 50, 61, 74, 75, 85, 90, and 178—183; Act XII of 1881, sections 1—23; Act VIII of 1876 (B. C.), sections 8—16, 87—98.

4. The Laws of Transfer, Prescription, and Pre-emption.	Act IV of 1882 (Transfer of Property Act); Act III of 1877, (Registration Act,; Act XV of 1877) sections 26—28 (Prescription); Mayne's Hindu Law and Usage, Chapter XII (Religious and Charitable Endowments); Macnaghten's Principles of Mahomedan Law, Chapters III—V (Sale, Pre-emption and Gifts); Snell's Principles of Equity, Part I, Part II, Chapters I—VI, and Part III, Chapters I—VI.
5. The Law of Contracts and Torts.	Stephen's Blackstone, Book II, Part II, Chapter V; Underhill on Torts; Act IX of 1872; Act I of 1877.
6. The Law of Crimes and Criminal Procedure.	The Indian Penal Code (Act XLV of 1860), thf whole of Chapters 1—5 and such portions o Chapters 6—23 as do not relate exclusively to the amount of punishment to be inflicted fo an offence; The Code of Criminal Procedurr (Act X of 1882) except Parts 5, 8 and 9e Chapters 39, 41, 44, and 45.
7. The Law of Civil Procedure, including the Law of Evidence and the Law of Limitation.	Sir Fitzjames Stephen's Introduction to the Evidence Act (1872), pages 1—134; The Code of Civil Procedure (Act XIV of 1882), Chapters 1—12, 15—22, 30—31, 33, 35—37, 40—43, 45—47; The Evidence Act (Act I of 1872); The Limitation Act (Act XV of 1877) omitting Schedule II.
8. The Hindu Law and the Mahomedan Law (with the exception of parts already included), and the Law of Intestate Succession.	Mitakshara, Chapter I, Sections I—V; Chapter II, Sections I—X; Dayabhaga, Chapters I, II, V, XI; Mayne's Hindu Law and Usage, omitting Chapters 1—4, 6—7, 11—12, 13, 20, and 21; Jogindranath Siromani's Commentaries on Hindu Law, Chapters 1, 2, 3, 11 and 12; Sirajiya (except the details as to succession of distant kindred); Macnaghten's Principles of Mahomedan Law, Chapters II, VII, VIII, and X; Act X of 1865 (Succession Act), Parts III—V.

R. C. MITTER.
MOHINY MOHAN ROY.
ASUTOSH MUKHOPADHYAY.
GOLAPCHANDRA SARKAR.
KALICHARAN BANURJE.

APPENDIX II.

1. The Principles of Jurisprudence; the History and Constitution of the Courts of Law and Legislative Authorities in India.	Maine's Ancient Law, Markby's Elements of Law (third edition); Student's Austin's Jurisprudence by Campbell, omitting Parts II and III; Cowell's Tagore Law Lectures, 1872.

2. The Law relating to Persons in their Public and Private Capacities, including the Law of Testamentary Succession.	Stephen's Blackstone, Book I, Book III, Chapters 1—4, Book IV, Part I, Chapters 2 and 6; Act IX of 1875 (Majority); Act VIII of 1890 (Guardians and Wards); Act IX of 1879 (B. C.), Parts I, II, and VII, Act III of 1881 (B. C.) (Court of Wards); Act III of 1872 (Civil Marriage); Act X of 1865 (Succession Act) except Parts III—V, XXX, XXXI, and XXXV—XL; Act XXI of 1870 (Hindu Wills Act) except the portions of the Indian Succession Act omitted from the study of that Act; Act V of 1881 (Probate); Act VII of 1889 (Succession Certificate); Mayne's Hindu Law and Usage, Chapter XI (Wills); Macnaghten's Principles of Mahomedan Law, Chapter VI (Wills).
3. The Law of Property, including the Law relating to Land Tenures and the Revenue Laws.	Stephen's Blackstone, Book II, Introduction, and Part I, Chapters 3—9, 15, 16, 20, and 23, and Book II, Part II, Chapters 1, 2, and 4; Regulations I, VIII, XIX (Sections 1—7), and XXXVII (Sections 1—6, 10, 12, 15) of 1793; Regulation VIII of 1819; Regulation XI of 1825; Act XI of 1859, omitting Sections 4, 16, 40—52, and 56—62; Act VII of 1880 (B. C.); Act XIX of 1873, Sections 146, 150, and 166—168; Act VIII of 1885 omitting Sections 2, 31—36, 39, 56—60, 62—64, 69—71, 76—83, 93—158, and 186—196; Act XII of 1881, Sections 1—23; Act VIII of 1876 (B. C.), Sections 8—16, 87—98.
4. The Law of Property, including the Laws of Transfer, Prescription, and Pre-emption.	Act IV of 1882 (Transfer of Property Act); Act III of 1877 (Registration Act); Act XV of 1877, Sections 26—28 (Prescription); Mayne's Hindu Law and Usage, Chapter XII (Religious and Charitable Endowments); Macnaghten's Princiciples of Mahomedan Law, Chapters III—V, and X (Sale, Pre-emption, Gifts, and Endowments); Snell's Principles of Equity, Part I, Part II, Chapters I—VI, and Part III, Chapters I—VI.
5. The Law of Contracts and Torts.	Stephen's Blackstone, Book II, Part II, Chapter V; Pollock's Law of Torts, Chapters 1—5, 7, and 9—10; Act IX of 1872; Act I of 1877.
6. The Law of Crimes and Criminal Procedure.	The Indian Penal Code (Act XLV of 1860), the whole of Chapters 1—5 and such portions of Chapters 6—23 as do not relate exclusively to the amount of punishment to be inflicted for an offence; The Code of Criminal Procedure (Act X of 1882) except Parts 5, 8, and Chapters 38—40, 42—43, and 46.
7. The Law of Civil Procedure, including the Law of Evidence and the Law of Limitation.	Best's Principles of the Law of Evidence, Introduction, Book I, and Book IV; The Code of Civil Procedure (Act XIV of 1882), Chapters 1—12, 15—22, 30—31, 33, 35—37, 40—43, 45—47; The Evidence Act (Act I of 1872); The Limitation Act (Act XV of 1877) omitting Schedule II

8. The Hindu Law and the Mahomedan Law (with the exception of parts already included), and the Law of Intestate Succession.	Mitakshara, Chapter I, Sections I—V, Chapter II, Sections I—X; Dayabhaga, Chapters I, II, V, XI; Mayne's Hindu Law and Usage, omitting Chapters 1—4, 6—7, 11—12, 13, 20, and 21; Jogindranath Siromani's Commentaries on Hindu Law, Chapters 1, 2, 3, 11, and 12; Sirajiya (except the details as to succession of distant kindred); Macnaghten's Principles of Mahomedan Law, Chapters II, VII, and VIII; Act X of 1865 (Succession Act), Parts III—V.

AMEER ALI.
G. C. PAUL.
HEMCHANDRA BANERJI.
KALICHARAN BANURJE.
GOLAPCHANDRA SARKAR.
GONESHCHANDRA CHUNDER."

RESOLVED—

That the Report be accepted and the revised lists of text-books recommended to the Syndicate for adoption with the following modifications:—

(i.) That in the list of text-books on the Law of Contract and Torts for the Honour Examination, Pollock on Torts be substituted for the chapter on Torts in Broom's Commentaries.

(ii.) That a foot-note be added to the list of text-books for the B. L. examination, to the effect that when any Act is named it is to be understood to mean that Act with all subsequent amendments.

A. M. NASH,
Registrar.

(Confirmed),
AMEER ALI,
President.

MINUTES

OF

THE FACULTY OF ARTS

FOR THE YEAR 1891-92.

No. 1.

THE 11TH JULY 1891.

Present:

THE HON'BLE SIR ALFRED CROFT, K. C. I. E., *President, in the Chair,*

NAWAB BAHADUR ABDOOL LUTEEF, C. I. E.
RAI KANAILAL DE, BAHADUR, F.C S., C. I E.
COL. H. S. JARRETT.
BABU OMES CHUNDER DUTT.
MAHAMAHOPADHYAY MAHESACHANDRA NYAYARATNA, C. I. E.
A. M. BOSE, ESQ.
A. M. NASH, ESQ.
THE REV. DR. K. S. MACDONALD.
BABU GAURISANKAR DE.
MAULAVI SURAJ-UL-ISLAM, KHAN BAHADUR
RAJA PIYARIMOHAN MUKERJEE, C. S. I.
BABU BANKIMCHANDRA CHATTERJEE.
BABU ISANCHANDRA BASU.
BABU NILMANI MUKERJEE.
MAULAVI ABDUL HAI.
BABU SARADACHARAN MITRA.
DR. C. J. H. WARDEN.
BABU GOLAPCHANDRA SARKAR.
BABU JOGINDRACHANDRA GHOSH.
N. N. GHOSE, ESQ.
BABU CHANDRANATH BASU.
BABU HARAPRASAD SASTRI.
SHAMSUL ULAMA MAULAVI AHMAD.
BABU UMESCHANDRA DATTA.
BABU RAJANINATH RAY.
SHAMSUL ULAMA SHAIK MAHMUD GILANI.
J. C. BOSE, ESQ., B Sc.
BABU SRINATH DAS.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F R. S. E.
MAULAVI MUHAMMAD ABDUR RAWUF.
BABU SYAMACHARAN GANGULI.
RAI GUNABHIRAM SARMA BARUYA, BAHADUR.
BABU MAHENDRANATH RAY.
BABU JOGINDRACHANDRA GHOSH.

71. Babu Asutosh Mukhopadhyay proposed that a committee be appointed to consider the propositions contained

in the following letter and any cognate propositions that may be brought before it :—

"To

THE REGISTRAR OF THE UNIVERSITY OF CALCUTTA.

SIR,

May I request the favour of your submitting this letter for the consideration of the Syndicate.

It will be in the recollection of all, that at the last Convocation for conferring degrees, the Hon'ble the Vice-Chancellor drew attention to the necessity of encouraging the study of Indian Vernaculars. He is reported to have said, "I also deem it not merely desirable, but necessary, that we should encourage the study of those Indian Vernaculars that have a literature, by making them compulsory subjects of our examinations in conjunction with their kindred classical language." Sharing the view thus set forth, and believing that the time has come when the University should take action in the matter, I beg to submit for the consideration of the Syndicate the following propositions:—

I. That in the Arts Examinations, candidates who take up Sanskrit should also be examined in either Bengali or Hindi or Uriya, and those that take up Persian or Arabic should be examined also in Urdu.

II. That the foregoing proposition be carried out in the manner following, that is to say :—

(A). In the F. A. Examination :—

(i) In addition to the text-books prescribed in the above-named classical languages, text-books be also prescribed in the above-mentioned corresponding vernacular languages.

(ii) The first paper be devoted to the classical language, and the second paper to questions on the vernacular text-books prescribed, and to an original composition in the vernacular.

(B). In the B. A. Examination :—

(i) In addition to the text-books prescribed in the abovenamed classical languages, text-books be also prescribed in the above-mentioned corresponding vernacular languages.

(ii) For the pass papers, the same scheme be adopted as for the F. A. Examination.

(iii) Of the honour papers, in lieu of the third paper on prose and poetry, a paper be set containing questions on the vernacular text-books and an original composition in the vernacular.

(C). In the M. A. Examination, in addition to the English Essay required by parapraph 5 of the M. A. Regulations, candidates be required to write an Essay in one of the abovenamed vernaculars on any subject connected with the History or Literature of the classical or vernacular language professed by them.

I have, &c., &c.,

ASUTOSH MUKHOPADHYAY."

BHOWANIPUR ;
1st March, 1891.

Babu Umeschandra Datta seconded the motion.

Raja Piyarimohan Mukerjee proposed as an amendment that it is not desirable to modify the Arts Examinations Regulations in the way suggested in the motion.

Maulavi Suraj-ul-Islam seconded the amendment.

Col. H. S. Jarrett, Nawab Abdool Luteef, Babu Rajaninath Ray, and Mahamahopadhyay Mahesachandra Nyayaratna opposed the motion.

Babu Bankimchandra Chatterjee, Babu Chandranath Basu, and Babu Mahendranath Ray spoke in favour of the motion.

Babu Nilmani Mukerjee spoke against the motion.

The Rev. Dr Macdonald, Mr. A. M. Bose, and Babu Haraprasad Sastri supported the motion.

With the consent of the meeting the amendment was withdrawn, being taken as a direct negative of the original motion.

The motion was then put to the vote, and declared lost by a majority of 17 to 11.

72. The following gentlemen were elected as members of the Boards of Studies :—

Babu Mahendranath Ray... ...	Mathematics and Mathematical and Experimental Physics
Mr A. M. Bose	Mathematical and Experimental Physics.
Babu Haraprasad Sastri	History, Political Economy and Geography.
The Hon'ble Mr. Justice Ameer Ali, C. I. E.	Ditto.
Maulavi Muhammad Abdur Rawuf...	Arabic, Persian and Urdu.
Shams-ul-Ulama Shaikh Mahmud Gilani.	Ditto

A. M. NASH,
Registrar.

(Confirmed),
A. CROFT,
President.

MINUTES OF THE SYNDICATE.

FOR THE YEAR 1891-92.

No. 4.

THE 20TH JULY, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D.L.,
Vice-Chancellor in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
THE HON'BLE SIR ALFRED CROFT, K. C. I. E.
CHARLES H. TAWNEY, ESQ., C. I. E.
THE HON'BLE MR. JUSTICE AMEER ALI, C. I. E.
BABU MOHINIMOHAN RAY.
E. A. BIRCH, ESQ., M. D.
SIR JOHN EDGAR, K. C. I. E., C. S. I.
J. S. SLATER, ESQ.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.

73. The Minutes of the meeting of the Syndicate held on the 20th June were read and confirmed.

74. Read the Minutes of the Faculty of Law, dated the 29th June.

RESOLVED—

That the revised list of text-books be adopted for the examinations of 1893.

75. Read the Minutes of the meeting of the Senate held on the 27th June.

RESOLVED—

That the Resolution of the Senate be communicated to the examiners with the intimation that, in the opinion of the Syndicate, it would be competent for the examiners to regard this reference as covering other similar cases.

76. Read the Minutes of the Faculty of Arts, dated the 11th July.

ORDERED—

To be recorded.

77. Read the following report of the Board of Examiners for the M. B. examination.

FROM

THE BOARD OF EXAMINERS

FOR THE M. B. EXAMINATION,

TO

THE REGISTRAR, CALCUTTA UNIVERSITY.

Dated the 22nd June, 1891.

SIR,

We have the honour to submit for the approval of the Vice-Chancellor and Syndicate the results of the M. B. examinations.

The number of candidates for the Preliminary Scientific M. B. examination was 35, of whom 2 passed in the first division, 8 in the second, 1 was absent, and 24 failed. Of the candidates who failed, 16 attained the standard of the Preliminary Scientific L. M. S. examination, 10 of whom had already passed that examination

For the First M. B examination there were two candidates, both of whom passed in the first division.

For the combined Preliminary Scientific and First M. B. examinations there were 10 candidates, one of whom passed the Preliminary Scientific examination in the second division and the First M. B. examination in the first division. One candidate obtained enough marks to pass the Preliminary Scientific and First L. M. S. examinations, 4 candidates attained the standard of the Preliminary Scientific L. M. S. examination, one of whom had already passed that examination; 2 were absent and 2 failed.

For the Second M B examination there were 6 candidates, of whom one passed in the first division, 4 in the second, and one failed.

The examinations have been conducted in accordance with the instructions laid down for our guidance in our letters of appointment.

We have the honour to be,
Sir,
Your most obedient servants,

(Sd.) EDWARD A. BIRCH.
" W. J. SIMPSON
" J WOOD-MASON.
" K. McLEOD.
" LALMADHAB MUKERJI.
" DAYALCHANDRA SHOME.
" KANAILAL DE.
" J. B. GIBBONS.
" S. MUKERJI.
" J. F. P. McCONNELL, M.D.
" O'CONNELL RAYE, M.D.

The Registrar stated that, in anticipation of the orders of the Syndicate, he had published the names of the successful candidates in the *Gazette*.

RESOLVED—

That the action of the Registrar be approved.

The following are the names of the successful candidates :—

PRELIMINARY SCIENTIFIC M. B. EXAMINATION.

FIRST DIVISION.

In Order of Merit.

1. Basu, Bimanbihari ... Medical College.
2. Bandyopadhyay, Charuchandra Ditto.

SECOND DIVISION.

In Alphabetical Order.

Basak, Madhusudan	...	Medical College
,, Ramlal	...	Ditto.
De, Jaygopal	...	Ditto.
,, Satischandra	...	Ditto.
Fox, Helen A.	...	Ditto.
Mitra, Satyasaran	...	Ditto.
Mukhopadhyay, Jajneswar	...	Ditto.
,, Jaminikanta	...	Ditto.
Sadhukhan, Phakirchandra	...	Ditto.

FIRST M. B. EXAMINATION.

FIRST DIVISION.

In Order of Merit.

1. Bandyopadhyay, Bipinbihari ... Medical College.
2. Bhattacharyya, Sureschandra ... Ditto.
3. Mukhopadhyay, Jajneswar ... Ditto.

SECOND M. B. EXAMINATION.

FIRST DIVISION.

Sen, Hemchandra ... Medical College.

SECOND DIVISION.

In Alphabetical Order.

Acharyya, Prankrishna	...	Medical College.
Adhikari, Hemnath	...	Ditto.
Bose, B. B.	....	Ditto.
Datta, Surendranath	...	Ditto.

The undermentioned candidates, who failed at the Preliminary Scientific M. B. and Combined Preliminary Scientific and First M B. examinations,

having attained the standard of the Preliminary Scientific L. M. S. examination, are declared to have passed that examination :—

PRELIMINARY SCIENTIFIC L. M. S. EXAMINATION.

In Alphabetical Order.

Abdul Azim	...	Medical College.
Bandyopadhyay, Haricharan	...	Ditto.
,, Satyaprasad	...	Ditto.
Chakrabarti, Chandrakanta	...	Ditto.
,, Rajendralal	...	Ditto.
Das, Kailaschandra	...	Ditto.
Fernand, W. J. A.	...	Ditto.
Mukhopadhyay, Haripada	...	Ditto.
Sarkar, Nakulchandra	...	Ditto.
Sen, Surendranath	...	Ditto.

The undermentioned candidate, who failed at the Combined M. B. examination, having attained the standard of the First L. M. S. is declared to have passed that Examination :—

FIRST L. M. S. EXAMINATION.

Chakrabarti, Chandrakanta ... Medical College.

78. Read the following report of the Board of Examiners for the F. E. examination :—

FROM

THE BOARD OF EXAMINERS

FOR THE F. E. EXAMINATION,

TO

THE REGISTRAR, CALCUTTA UNIVERSITY.

Dated the 19th June, 1891.

SIR,

We have the honour to submit for the approval of the Vice-Chancellor and Syndicate the results of the F. E. examination.

The number of candidates registered for the F. E. examination was 12, of whom 4 passed and 8 failed. All of the successful candidates were placed in the second division.

The examination has been conducted in accordance with the instructions laid down for our guidance in our letters of appointment.

We have the honour to be,
Sir,
Your most obedient servants,

(Sd.) S. F. DOWNING.
,, J. S. SLATER.
,, A. D McARTHUR.
,, ALEX. PEDLER.
,, C. LITTLE.
,, W. BANKS GWYTHER.
,, G. C. STAWELL.

ORDERED—

To be recorded.

79. On the result of the B. A. examination, the Woodrow Scholarship was awarded to Debendranath Basu of the City College.

On the result of the B. A. examination, the Kesabchandra Sen Prize was awarded to Nandalal Mukhopadhyay of the Presidency College.

80. Read an endorsement from the Director of Public Instruction, Bengal, forwarding copy of his office Memo., ordering that the Rajkumar Jubilee High English School at Noakhali having been proved guilty of admitting a student, Anwar Ali, under the name of Anwaruddin, to the first class of the school without a transfer certificate, and without a letter of application from his guardian, and thereby of wilfully transgressing Rule 1 of the Transfer Rules for High Schools, is debarred from competing for Junior Scholarships at the Entrance examinations of 1891, 1892, and 1893.

Read also two letters and two telegrams from the Head Master, Rajkumar Jubilee High School, Noakhali, and others, praying for reconsideration of the order of the Syndicate that the school should be struck off the list of schools allowed to send up candidates to the Entrance examination.

RESOLVED—

That the Director of Public Instruction be informed that the Rajkumar Jubilee High School, Noakhali, has been struck off the list of schools recognised as qualified to send up candidates to the Entrance examination.

RESOLVED ALSO—

That the Head Master, Rajkumar Jubilee High School, be informed that the Syndicate see no reason to modify the order passed on the 20th June.

81. Read the following letter from the Director of Public Instruction, Bengal, and a copy of Bengal Government Resolution No. 294, dated the 21st April, 1891, on the subject of the re-organisation of the Civil Engineering College at Sibpur, and inviting the special attention of the Syndicate to paragraph 10 of the same.

No. 3319.

FROM—THE DIRECTOR OF PUBLIC INSTRUCTION BENGAL,

TO—THE REGISTRAR, CALCUTTA UNIVERSITY.

Darjeeling, the 26th May, 1891.

SIR,

I HAVE the honour to forward the inclosed copy of a Resolution of the Government of Bengal, dated the 21st April, 1891, on the subject of the reorganisation of the Civil Engineering College at Seebpore, with the request that you will be good enough to lay it before the Syndicate, inviting their attention especially to para. 10 of the Resolution. I also beg to inclose copy of those portions of the Report of the Committee of Inquiry which are therein referred to.

2. It will be seen that the Committee proposed, and the Government now recommend, the following three changes in the Regulations for the degree and licence in Engineering :—

(1.) That B. A. Students on joining the College be admitted to the second-year class, with certain remissions in the subjects in which they have to be examined.

(2.) That the first of the two examinations now held by the University, before conferring on Engineer students the degree of B. E. or L. E., be abolished.

(3.) That the course of study indicated in Appendix A of the Committee's Report be adopted. It admits of the reduction of study from four years to three.

The grounds on which these changes are proposed are set forth in the extract from the Committee's Report now forwarded.

3. I beg to recommend these proposals, and the further proposal that an alternative course for Mining Engineers be introduced into the University curriculum, to the early and favourable consideration of the Syndicate.

I have the honour to be,
Sir,
Your most obedient Servant,
(Sd.) A. CROFT,
Director of Public Instruction.

EDUCATION DEPARTMEMT.

EDUCATION.

CALCUTTA, THE 21st APRIL, 1891.

RESOLUTION.—No. 294.

READ—

The following papers on the subject of the report by the Committee appointed by this Government to enquire into the method of instruction of the Seebpore Engineering College :—

This Government Resolution, dated the 30th July, 1887.

Letter from the Director of Public Instruction, No. 1088, dated the 20th February, 1889, and its enclosures.

Letter to the Government of India, Home Department, No. 12T—G, dated the 3rd June, 1889.

Letter from the Government of India, Home Department, No. 312, dated the 13th July, 1889.

Memorandum to the Secretary to the Government of Bengal, Public Works Department, No. 527, dated the 3rd August, 1889.

Memorandum from the Secretary to the Government of Bengal, Public Works Department, No. 3462G, dated the 28th August, 1889, and its enclosures.

Letter to the Director of Public Instruction, No. 641, dated the 9th September, 1889.

Letter from the Director of Public Instruction, No. 6824, dated the 12th December, 1889.

Endorsement to the Public Works Department of this Government, No. 845, dated the 21st December, 1889.

Letter from the Director of Public Instruction, No. 1545, dated the 21st March, 1890.

Letter to the Director of Public Instruction, No. 271, dated the 21st April, 1890.

Letter from the Director of Public Instruction, No. 7112, dated the 28th December, 1890.

Memorandum from the Public Works Department of this Government, No. 4206G, dated the 11th December, 1890, and its enclosures

THE Civil Engineering College, formerly a department of the Presidency College, Calcutta, was transferred in 1880 to Seebpore, in close contiguity with the Workshops established at that place about the same time by the Public Works Department. The object which the Government had in view in thus associating the College with the Workshops was to secure the combination of manual training with class instruction, in order to qualify the students of the

College in the fullest possible manner for the duties which they would afterwards have to discharge. With this view, arrangements were made for the instruction of four classes of students, namely, (1) Civil Engineers, (2) Mechanical Engineers, (3) Civil Overseers, (4) Foreman Mechanics. The first two classes were to be composed of matriculated members of the University, and to be prepared, after a course of study extending over four years, for the Licence in Engineering (Civil or Mechanical) granted by the University. The last two classes were of a lower status in point both of the initial qualifications demanded of the students and of the standard of instruction to be imparted to them. The students in the Foreman Mechanic class were to be apprenticed to the Executive Engineer in charge of the Workshops, and hence were known as mechanical apprentices. Every student in each of the four classes was to work for some hours a day in the shops, both during the period of his class instruction and for a certain time after its close.

2. The College opened with three classes, for the training of Civil Engineers, Civil Overseers, and Foreman Mechanics respectively. No students presented themselves, either then or afterwards, for admission to the Mechanical Engineer class, which has consequently never been opened. After two years it was found that very few students joined the Civil Overseer class, and it was accordingly decided to close it; the course of instruction in the apprentice class being at the same time so modified as to fit the pupils for employment either as overseers or as mechanics. From that date the College has consisted of two classes only, Engineers and Apprentices, all of whom have gone through the specified course of instruction, both in class and in the Workshops. The number of students passing the University examinations for the Licence in Engineering has been comparatively small; but, on the other hand, large numbers of apprentices have left the College year by year, with certificates of competency signed by the Principal of the College and the Executive Engineer in charge. It is understood that these students have had no difficulty in obtaining remunerative employment in one or other of the many channels which private enterprise opens up to mechanical skill.

3. For several years the shops were kept in full work, and thus afforded the students ample opportunities for

practical training. Of late, however, owing to a variety of causes, work has been sent to the shops in diminished quantity, and the manual instructions of the students has to that extent suffered. The diminution of work was due to conditions arising in the Public Works Department; and on the assumption that it was to be permanent, a Committee, which had been appointed under the Resolution cited in the preamble to investigate the course of study and other matters connected with the College, recommended in 1889 that the Workshops, which were not indispensable to the Public Works Department, and in their existing shape were not fully suited to the practical instruction of students, should be closed altogether; the manual training of the students being provided for, after their theoretical course was over, in Railway workshops and other places affording similar opportunities of instruction.

4. To this proposal the Director of Public Instruction demurred. He regarded the proposed abolition of the shops with serious misgiving, as likely to jeopardise, if not to ruin, the mechanical apprentice class, hitherto the most important and successful of all the classes of the College. His grounds of objection were—

(*a*) That the period of training was too long if apprenticeship was not to begin, as under these proposals it could not begin, until the theoretical course was finished.

(*b*) That it was doubtful whether outside shops could provide the required number of apprenticeships, or would care to take apprentices wholly ignorant of tools.

(*c*) The incongruity of maintaining a technical institution for the training of mechanics without any provision for manual instruction.

Consequently, in the opinion of the Director of Public Instruction, the maintenance of the Workshops was a necessity. In a communication No. 12T—G, dated the 3rd June, 1889, addressed to the Government of India, Sir Steuart Bayley expressed the doubt that he felt in regard to the essential point of providing a substitute for the present system of practical training in the Workshops. The Government of India took the same view, and in letter No. 312, dated the 13th July, 1889, observed :—

"There exists in the Seebpore Workshops the nucleus of a technical institution, the value of which would be seriously affected by disassociating the practical from the theoretical training of the College. The Governor-General in Council doubts if any valid inference can be drawn from the state of the attendance rolls unfavourable to the prosecution of the experiment; and he attaches no great

weight to the argument that hitherto the school has not been a financial success. He thinks the importance of the interest involved calls for perseverance in the undertaking, and he would be glad if, with a view to improving the opportunities for practical instruction afforded by the school, it were arranged that some of the work of the Public Works Department should continue to be undertaken at the Seebpore Workshops, and Local Boards and other bodies were encouraged to patronise the institution in a similar manner."

The foregoing expression of opinion is in full conformity with the views of the Lieutenant-Governor, who holds that for the efficient training of students of the various branches of the Engineering profession, it is essential that theoretical and practical instruction should go hand-in-hand. Orders have accordingly been issued in the Public Works Department that, in future appropriations of funds for expenditure on public works, it may be arranged to send a sufficient quantity of work to the Seebpore shops, so as to keep them regularly and fully employed.

5. It has also been brought to the notice of the Lieutenant-Governor that, even when the shops are kept in full work, a risk of another kind arises, such as to deprive the students of the full benefit of attendance at them. The difficulty is that a student's labour is not so useful or productive as that of a trained artisan; and hence, when the Public Works Department has a heavy piece of work to put through the shops, the students have to stand aside and look on while others do the work, instead of securing the practical advantage of taking part in it themselves. Fully impressed with the importance of that consideration, and desiring to secure to the students ample and regular opportunities of manual training, the Lieutenant-Governor has given orders for the purchase of six lathes, four shaping machines, and two planing machines, which will be reserved for the exclusive use of the students. The cost of these machines, with necessary gearing, amounts to Rs. 12,000, and this sum has been provided in the estimates for 1891-92. The machines have been purchased, and are now in process of erection in the shops. After the students have become practically familiar with the use of these tools, they will be required to take part in the general work of the shops, one apprentice at least being attached to each piece of work or each machine, either in actual charge of it or as an assistant, as the Executive Engineer may decide.

It has also been represented by the Director of Public Instruction and others that a well equipped model-room is an indispensable adjunct to the College. The erection of a building for this purpose has been sanctioned at an estimated cost of Rs. 7,153, and is now approaching completion. This will contain the smaller and more portable models, which are required among other purposes for frequent use in the free-hand drawing class; and the room has therefore been erected close alongside of the existing drawing-hall, of which it forms a new wing. Estimates are also under preparation for the erection of a testing room, with necessary machinery for testing the strength and the breaking strain of materials of various kinds,—one of the most important subjects with which an Engineer has to deal. The testing-room will be so designed as to afford room for the larger models, which are only needed for occasional reference and would occupy too much space in the model-room. Orders have recently been sent to England for the purchase, through the Store Department of the India Office, of a fresh supply of drawing and engineering models.

6 Within the last two years the number of students in each department of the College has very largely increased, and there are now 273 students on the rolls, 103 of them being in the Engineer and 170 in the Apprentice classes. It has therefore become necessary to provide for more continuous and systematic instruction in the different branches of their practical work than the present staff can supply. Under existing arrangements one-third of the time of the three European foremen is supposed to be given to the instruction of students, and is accordingly paid for by the Education Department; five native instructors, who are skilled artisans in their different trades, are also employed exclusively for this work. The staff will now be strengthened by the appointment of one European and four more native instructors, whose whole time will be devoted to the practical training of the students, their salaries being charged to Education. A provision of Rs. 6,000 is also made in the educational estimates of 1891-92, on account of the wear-and-tear of tools and the waste of materials by students while at work in the shops at an estimated rate of Rs. 30 a year for each student. The latter charge, like that for instructors, who are artisans borne on the Public Works establishment, has been in

force for some years; but the necessary adjustment has hitherto been effected by transfer-debit, after the close of each year, from the Public Works to the Education Department without previous budget provision.

7. The following statement summarises the additional expenditure sanctioned for 1891-92, under the present or other recent orders, for the better practical training of students in the Seebpore College :—

		Rs.
(1)	New machine-tools for the use of students ...	12,000
(2)	Erection of a model-room	7,153
(3)	New models from England	600
(4)	One European instructor on Rs. 180—Rs. 200...	2,480
(5)	Five native instructors on Rs. 40—Rs. 50...	2,850
	Total ...	25,083

This is exclusive of the new testing-room and testing apparatus, the cost of which has yet to be furnished. It also excludes the salary, lately sanctioned by the Secretary of State for India at the rate of Rs. 300 a month, of a European head-master for the Apprentice Department, an officer who is also charged with the supervision of the Christian students' mess and with the general arrangements for the convenience and well-being of the students, all of whom, it may be noticed, are resident on the premises.

8. The Committee to which reference has already been made, and which consisted of the gentlemen named in the margin, was appointed in the first instance to revise the courses of study in the Seebpore College. After careful enquiry, the Committee recommended that the standard for admission to the Engineering Department of the College should be raised, by requiring a candidate to have passed one or other of the following tests :—

Colonel G. F. E. S. Neill, R.E., *President.*
Mr M. Finucane.
" S. F. Downing.
" F. J. E. Spring.
" J. S. Slater.
" J. H. Gilliland.

(1) The Entrance examination of the Calcutta University, after obtaining not less than 40 and 50 per cent. respectively of the marks assigned to English and Mathematics. With this qualification the candidate must be under 19 years of age.

(2) The F. A. examination of the Calcutta University; the candidate's age being under 21 years.

(3) The B. A. examination in the B Course; the candidate's age being under 23 years.

The Committee further proposed that scholarships should be so distributed as to attract students of the highest attainments; and the Director of Public Instruction considered that this object could best be secured by awarding the ten special scholarships, reserved for students on admission to the College, to the following classes of students in order:—(1) Bachelors of Art who have taken up the B Course; (2) candidates who have passed the First Arts examination; (3) other candidates according to the number of marks gained in English and Mathematics jointly.

These recommendations were sanctioned in Government order, No. 271, dated the 21st April, 1890.

9. The failure of the majority of the College students at the examination for their degree was the cause which more immediately led to the institution of this enquiry; and in order that those who were unsuccessful at that ordeal might still obtain some acknowledgment of the extent to which they had prosecuted their studies, the Committee recommended that the Principal of the College should be authorised to hold a final College examination of the students of the Engineer class, and to issue certificates of proficiency in the theoretical course, similar to those which are granted to students of the apprentice class. The holders of these certificates, whether they obtain a degree or not, would afterwards be put through the full course of manual instruction and practical training prescribed for the Engineer class. It is stated in the report that—

"The Committee considers that all students of the Engineer class, in common with those of other classes, who have gone through a full course of instruction, ought to be furnished with certificates of having done so. Under the rules now in force, a student of the Engineer class, who fails in the University examinations, has not only nothing to show for the four years' theoretical training he has undergone, but he is barred from going through the course of practical training, which notwithstanding his failure in taking a degree, would undoubtedly add to the value of the theoretical training he has received at the College. The Committee therefore recommends that the Principal of the College be authorised to hold a final College examination of a student of the Engineer class, and to issue certificates similar in character to those which are granted to students of other classes of the institution. The holders of these certificates, whether they obtain a degree or not, should also, in the opinion of

the Committee, be put through the full course of manual instruction and practical training which is recommended for this class."

This proposal, which has received the support of the Director of Public Instruction, is now sanctioned by the Lieutenant-Governor.

Of three minor suggestions made by the Committee, that which regards the charges made for the rent of students' quarters has been disposed of by orders issued in July, 1888, and sanction is now accorded to the payment of the travelling expenses of students engaged on surveying and similar work, as also to the publication of an annual calendar for the College.

The erection of a separate hospital building for the treatment of sick students was also included in the recommendations of the Committee ; and designs with this object are now being prepared by the Public Works Department in consultation with the Civil Surgeon of Howrah, who is in medical charge of the College.

10. The Committee has put forward certain proposals which require the sanction of the Calcutta University, namely—

(1) That B. A. students on joining the College be admitted to the second-year class, with certain remissions in the subjects in which they have to be examined.

(2) That the first of the two examinations now held by the University, before conferring on engineer students the degree of B. E. or L. E., be abolished.

(3) That the course of study indicated in Appendix A to the Committee's report be adopted. It admits of the reduction of the period of study from four years to three, by the omission of some branches of the higher mathematics and of mineralogy and metallurgy, as not being indispensable for the general education of Engineers.

These recommendations also command the support of Sir Alfred Croft, who has undertaken, with the approval of the Lieutenant-Governor, to commend them to the favourable consideration of the Senate. In view, however, of the probable development of the mining industry in Bengal, the Director of Public Instruction will also be requested to suggest to the University the introduction of an alternative course for Mining Engineers, a subject which in another connexion has already attracted the Lieutenant-Governor's attention.

11. In regard to the present arrangement, according to which Engineering students are instructed simultaneously in the theoretical and practical portions of their profession, it is stated in the report of the Committee that—

"The system of combining practical work in the shops with an advanced theoretical training has now been tried for eight years, and has not been found to be superior to the old system, where workshop practice followed the theoretical studies. The combination is irksome to the students, and has been found to interfere with their private studies. Four hours in the lecture-room and three hours of manual work in the shops, with about a couple of hours extra for drawing, is the average daily work. This taxes the energies of the students, and it is scarcely to be wondered at that some of them neglect to spend, as they should do if they wish to keep up with the lectures, a couple of hours a day in writing up their notes and preparing for the lectures of the following day. This combination of theory and practice also necessitates spreading the course over four years, whereas a shorter period would be sufficient if the theoretical and manual courses were separated."

The Committee has accordingly proposed to postpone the manual course for Engineering students until the theoretical course has been completed. The Director of Public Instruction has approved this proposal so far as it affects the Engineering classes. The Lieutenant-Governor attaches great weight to the reasons by which it is supported, and directs that the change be now carried out. In the apprentice classes the combination of shop-work with class-instruction will still be maintained; but, in accordance with the recommendations of the Committee, the mathematical and science subjects will be to some extent simplified, so as to allow the apprentices more time for study.

12. In accordance with the foregoing orders, the distribution of the time spent by Engineer students and apprentices in the class-room and in the shops will now be revised as follows:—

(1) For Engineer students the theoretical course will, with the consent of the University, be reduced from four years to three, during which they will be excused from manual work. The fourth year they will spend exclusively in the workshops; subject to the alternative that a certain number of them who may be willing to go may be drafted, after a preliminary course of six months in the use of tools, to one or other of the railway workshops at Kanchrapara, Saidpur, and Samastipur, where they will get opportunities of seeing newer machinery and a larger

scale of work than will generally be possible at Seebpore. In the fifth year the students will, as now, be deputed to brick-making at Akra or to works in progress, under the orders of the Public Works Department.

(2) For the apprentices the earlier term of combined class-instruction and shop-work will continue to occupy three and a half years; while the final period of a year and a half will be spent in shop-work exclusively. It will be understood that surveying is taught very thoroughly to all these students as a part of their preliminary course, so that they will also be qualified for subordinate appointments in the Public Works Department; and the final certificates issued to apprentices on passing out at the close of their five years' course will specify that qualification.

13. The Lieutenant-Governor attaches very great importance to the maintenance of the College at the highest possible point of efficiency. He considers that the increase of the number of young men trained to Engineering pursuits, and qualified by their training to develope the resources of the province, is an object on which he is justified in incurring large outlay, since he is confident that all such outlay will be fully reproductive. It has given him much satisfaction to find that the results of the University examinations in recent years have shown considerable improvement, brought about apparently by a better understanding between the examiners and the students to be examined. Under existing orders one and two appointments in the grade of Assistant Engineer are reserved in alternate years for students of the Seebpore College who qualify at the University examinations, and who afterwards show satisfactory progress when posted on probation to public works. The Lieutenant-Governor is also prepared to guarantee that four appointments in the Upper Subordinate grade of the Public Works Department shall annually be given to qualified students of the College who have graduated in Engineering at the Calcutta University, and successfully passed the subsequent period of practical training. He also accepts the recommendation of the Committee that the students of the College who, without having passed the University examination in Engineering, have passed the final College examination, and have also gone through the subsequent two years' course of practical instruction,

should be declared qualified for employment as District Engineers, provided they have been employed on Engineering works for not less than five years, exclusive of the time spent in their practical course, and hold satisfactory certificates of good conduct and efficiency during such employment.

The foregoing remarks apply principally to students of the Engineer Department. But the apprentice classes constitute a department of at least equal value; and the extension of railways and other public works, coupled with the present and probable development of private enterprise in various branches of manufacture, is likely to afford abundant opportunities of remunerative employment to students of this useful class. The Lieutenant-Governor looks forward to the time when District and Municipal Boards will devote a portion of their funds, as they have already done and are doing in several instances, to the establishment and maintenance of local technical schools. The shops at Seebpore will be able, as soon as their own requirements in this direction are fully met, to give valuable assistance to such projects by manufacturing and supplying to local schools, at a cheap rate, the various machines and other tools which they will require. It is also hoped that local scholarships may be established, so as to enable promising pupils of such schools to proceed to Seebpore for further and better training. In these ways it is hoped that the Seebpore College will attain to its true position as the centre of genuine technical education in Bengal; and when once its character in that line is fully established, it will be in a position to take up various branches of special industry, and by imparting to students some knowledge of the special principles and mechanical processes that underlie each, to develope and assist such industries in many useful ways. The report that Mr. Collin has recently furnished supplies much necessary information as to the existing industries of Bengal, and it will be for the Education Department and the College authorities to ascertain how far it may be possible to promote their development or to avert their extinction.

14. The proposal made by the Committee at page 20 of the report, to appoint Lecturers on Agriculture and Agricultural Chemistry and Botany, with the object of training students for the callings of managers of private or Wards' estates, or Tahsildars in tracts under Govern-

ment management, is under the consideration of the Lieutenant-Governor and will be separately dealt with.

15. In conclusion, the Lieutenant-Governor desires to express his acknowledgments to the members of the Committee for their careful report, and particularly to Mr. Spring, whose valuable papers on the Seebpore College and on technical education generally have been of very great service to the Lieutenant-Governor in arriving at a settlement of this important question.

By order of the Lieutenant-Governor of Bengal,

(Sd.) C. E. BUCKLAND,
Secretary to the Govt of Bengal.

No. 295.

COPY forwarded to the Director of Public Instruction for information and guidance.

By order of the Lieutenant-Governor of Bengal,

(Sd.) W. MAUDE,
Under-Secretary to the Govt. of Bengal

CALCUTTA,
The 21st April, 1891.

Extract from the Report of the Committee appointed to investigate the Course of study and other matters connected with the Civil Engineering College at Seebpore.

Revision of the course of studies.

The system of combining practical work in the shops with an advanced theoretical training has now been tried for eight years, and has not been found to be superior to the old system where workshop practice followed the theoretical studies. The combination is irksome to the students, and has been found to interfere with their private studies. Four hours in the lecture-room, and three hours of manual work in the shops, with about a couple of hours extra for drawing, is the average daily work. This taxes the energies of the students, and it is scarcely to be wondered at that some of them neglect to spend, as they should do if they wish to keep up with the lectures, a couple of hours a day in

writing up their notes, and preparing for the lectures of the following day. This combination of theory and practice also necessitates spreading the course over four years, whereas a shorter period would be sufficient if the theoretical and manual courses were separated. The course of study at present in force, with very slight modifications, is the same as that proposed by the Committee which was originally formed to consider the advisability of transferring the Civil Engineering Department of the Presidency College to Seebpore. As soon as practicable after the establishment of the Seebpore College, the University was asked to alter the status of their examination in engineering, and bring it more into conformity with the standard laid down by the Government of Bengal in the Resolution No. 2310E, dated 15th December, 1879. Much attention was paid to the subject by the Faculty of Engineering, and as the extension of the course of studies was considerable, the Faculty considered it desirable to hold two examinations in engineering, of which the first was called the first examination in engineering and the second examination for licences and degrees in engineering.

The reasons which led the Faculty of Engineering to propose this alteration are given in the minutes of the Calcutta University for 1881-82, and are quoted here for reference. "The object, which the Faculty have in view in recommending the holding of a preliminary examination at this stage, is to relieve the candidates from the burden which would otherwise be imposed upon them by having to pass at one time an examination in a large number of subjects, some of which, be it observed, are of a strictly professional, others of a non-professional character. The Faculty are decidedly of opinion that the examination in engineering, as it has hitherto been conducted, involving, as it does, the attendance of the candidates for eight days, with the interval of one Sunday only, imposes a severe strain upon their bodily and intellectual powers."

The length of the course of study when this preliminary examination was instituted was four years, and from their recommendation it will be seen that the Faculty of Engineering clearly desired to lessen the strain which one examination would impose, by relieving the students of a portion of the examination in some of the non-professional subjects of

study. Several of these non-professional subjects would, in the natural course of events, have been studied in the first or second year of the student's career at the College, and the desire to relieve the students of the strain on their memories of having to pass an examination at the end of their fourth year in subjects which they studied during their early College days is quite intelligible to the Committee, and, considering the large number of non-professional subjects which the students had to learn, the Faculty of Engineering had no other course open to them than to recommend the institution of a preliminary examination. If these conditions are still to remain in force, the necessity of the preliminary examination would still exist; but after a careful consideration of the course of study and its duration, the Committee is agreed that not only should the course of study be curtailed, but owing to the time that will be gained if the practical work is deferred until the theoretical course has been completed, that three years instead of four will suffice. If these suggestions are accepted, the reasons for the preliminary examination will in the Committee's opinion no longer exist, and it should therefore be abolished. If, on the other hand, the Committee's proposals regarding the alterations in the course do not meet with the approval of Government, the University Regulations should not be interfered with.

Proposed theoretical course for the Engineer branch.

The detailed course which the Committee proposes for the Engineer branch is given in Appendix A, and much time and thought have been expended in its preparation. As the course is given in great detail, and as any comparison between the suggested course and the existing one would entail a considerable expenditure of time and labour, the following brief resumé of the alterations proposed, with the reasons which prompted the Committee to make them, is given for ready reference.

In Mathematics the following changes are proposed :—

(*i*). That DeMoivre's Theorem and the Expansion of Trigonometrical Functions be eliminated.

The reasons for this curtailment are—*firstly*, that the utility of this process of mathematical reasoning, although it is a great help in training the mind to grapple with advanced methods of mathematical analysis, is not essential

in the education of an Engineer, to whom the study of mathematics is rather a means than an end, the end being the solution of problems which occur in practice, and which seldom if ever involve a knowledge of this branch of trigonometry; *secondly*, that the expansions are studied under the head of the Differential Calculus, and the solutions by this method of analysis are of a simpler and easier form, so that if required in an Engineer's practical work the students will be in a position to apply them, and will be saved the time and trouble that would have to be expended if the subject were treated trigonometrically.

(*ii*). That Analytical Conic Sections be struck out.

The course already includes Geometrical Conics, which the Committee considers sufficient in this part of mathematics for the training of an Engineer. Very few practical problems arise in an Engineer's work which require a knowledge of Analytical Conics, and those which do occur are of such a simple character that a mere knowledge of the ordinary equations to a straight line, circle, parabola, ellipse or hyperbola is all that is required, and this could easily be imparted (it in fact forms part of the instruction in Geometrical Conics) without adding the whole subject of Analytical Conics.

(*iii*). That the instruction in the Differential and Integral Calculus be somewhat curtailed.

The exact amount of the curtailment in this subject will be ascertained from a comparison of the existing and proposed courses. The elimination of Analytical Conics would render a curtailment necessary; but besides this, from careful consideration of the practical problems which present themselves for solution, the Committee is of opinion that no very extended knowledge of this method of mathematical solution, is required for an Engineer. If he is able to differentiate and integrate simple expressions, and is conversant with the elementary principles which underlie the evaluation of maxima and minima values of functions, there are few problems likely to occur during an Engineer's professional career, which he will not be in a position to solve.

(*iv*). That more particular stress be laid on a practical acquaintance with Logarithms. The saving of time that results from the use of tables, coupled with the greater accuracy in the work, are so well known that the

Committee need adduce no further reasons for suggesting this slight alteration in the course.

The proposed course in chemistry, light, heat, electricity, magnetism and geology has been left pretty much in the same state as before ; but the scope of instruction has been defined in greater detail. In mineralogy, however, a considerable curtailment has been made, and the proposed course of instruction includes only those minerals which an Engineer might be required to know something about. The Committee has little hesitation in recommending this curtailment, as Engineers in this country are seldom, if ever, called upon to perform any duties where an extended knowledge of minerals is concerned. The course proposed is sufficiently diffuse, and of such a practical nature that any passed student, if called upon, should be able, with the help of books, to report on the more common minerals that are to be met with in any part of India where students of the College are likely to be employed.

The proposed course eliminates Metallurgy as a special branch of Natural Science, but provision is made, under the head of Engineering, to include the Metallurgy of Iron and Steel, the most important metals as far as an Engineer's education is concerned. In recommending this curtailment in the course, the Committee has been actuated by a desire to impart only such instruction as will be of advantage to the bulk of the students educated in the College.

They are quite aware that the mineral wealth of India is still undeveloped, and that an extension in its development will open out a new era of prosperity in the country, but they scarcely consider that such a contingency will be furthered by imparting this class of instruction to the Engineer students of the College. In their opinion, the means of development must primarily begin in the same way as all former mechanical and industrial advances in India have begun, namely, by the importation of the services of skilled specialists, that is, of men who have been actually employed in the various industries in other countries, and who are in a position to undertake their introduction into this country on the same commercial principles that permit of their being carried on with success in the centres in which they now thrive. In this part of India scarcely anything has been done in this respect, and any attemt to impart the theory of the

extraction of either the precious or other metals from their ores must be inoperative of advantage either to the State or to the individual, and the Committee do not think that they are suggesting what can be looked upon as a retrograde movement when recommending the elimination of the metallurgy of metals, other than iron, from the College course. A reference to the course in Chemistry will show that a general knowledge of the chemistry of the metals is included, and the Committee consider that this is quite sufficient, on utilitarian grounds, for the Engineer students of the College.

The course in Engineering has not been altered; all that the Committee has done is to draw up the existing course in greater detail, and in doing so it has been guided by the course of instruction laid down for students at Cooper's Hill. From a comparison of the two courses it will be seen that they are almost identical, and that the proposed course is quite up to the standard of the Cooper's Hill compulsory course.

APPENDIX A.

COURSE FOR ENGINEERS.

I.—MATERIALS OF CONSTRUCTION.

CLASSIFICATION
- (*a*) Stone, brick, tiles, terra-cotta, timber, metals.
- (*b*) Limes, cements, mortars, concretes, plasters.
- (*c*) Mastics, glue, paints.

STONE.

Characteristics of Building Stone.—Durability dependent on atmospheric influence and physical structure. Facility of working; hardness; strength; weight; appearance; position in quarry; seasoning; natural bed; agents which destroy stone.

Examination of stone.—Fracture. Tests:—crushing; absorption; Brard's test; acid test; Smith's test. Practical way of ascertaining weathering qualities.

Classification of stone. Scientific.—Siliceous; argillaceous, and calcareous: *Practical.* Granites and other igneous rocks; slates; sandstones; limestones.

Granite.—Common granite. Syenite and syenitic granite; quarrying and dressing: uses to which granite is applied.

Igneous rocks other than granite.—Porphyry, gneiss, mica schist, hornblende schist, trap, basalt.

Slates.—Cleavage, plerry, quarrying, hardness, toughness, grain veins objectionable, pyrites. Tests.

Sandstones.—Composition, colour. Practical classification. Fracture a test of quality. Weight and absorption.

Limestones.—Composition, texture, marbles, compact limestones, granular limestones, shelly limestones, dolomite.

Artificial stone.—Ransome's, Sorel's, Victoria stone.

Preservation of stone.—Bituminous matter, drying oil, silicate of potash, silicate of lime.

Quarrying.—Mode of conducting quarrying operations in India. Blasting.

BRICKS, TILES AND TERRA-COTTA.

Brick-earths.—Effect of the following ingredients in brick-earths :—Alumina, silica, lime, carbonaceous matter, alkalies, salt, oxide of iron, reh.

Practical classification—Strong clays ; loams, marls, malm.

Composition of a good brick-earth. Colour of bricks.

Brick-making—Preparation of brick-earth :—Unsoiling, digging and weathering, grinding, washing, tempering.

Moulding.—Slop moulding, sand moulding, pallet moulding, frog, form of mould, and size of brick.

Drying.—In sheds, out of doors, hacking, scintling.

Burning.—In clamps, in kilns, amount of fuel required, comparative advantages of clamp and kiln burning, Hoffmann's kiln, Bull's kilns.

Characteristics of good bricks.—Freedom from flaws, shape, absorption, texture.

Tests for bricks.—Fractured surface, Brard's test.

Fire-clay.—Uses, where found, composition.

Tiles.—Preparation of clay, moulding pot, and flat tiles, various forms of tiles in use in India.

Terra-cotta.—Nature of clay, preparation of clay, moulding, glazing, burning.

LIMES, CEMENTS, MORTARS, CONCRETES AND PLASTERS.

Constituents of limestone that do not produce hydraulicity.—Carbonate of lime, sand.

Constituents that produce hydraulicity.—Clay, soluble silica, carbonate of magnesia, alkalies, sulphates.

Classification of limes and cements.—Fat limes, poor limes, hydraulic limes, cements.

Varieties of lime in common use.—Fat limes, grey chalk, lias, carboniferous, magnesian ; limestones used in India ; kunkur.

Artificial hydraulic lime. Natural cements.—Carbonate of magnesia, cement stones.

Roman cement.—Weight, strength, storing, uses. Medina and Atkinson's cements.

Artificial cements. Portland cement.—Manufacture from chalk and clay. Manufacture from limestones and shale. Tests of quality. Rough tests. Storing.

Strength when mixed with sand. *Scott's cement. Selenitic cement. Pasley's cement.*

Lime and cement burning.—Forms of kilns. Flare and tunnel kilns. *General rules for burning.*—Heat gradually applied, temperature, size of lumps, quantity of fuel, appearance of stone while burning. Overburnt and underburnt cements. Dead-burnt lime.

Sand.— Pit sand, river sand, sea sand, screening and washing sand. Examination of sand.

Pozzuolanas.—Natural and artificial pozzuolanas.

Mortar.—Ordinary mortar, cement mortar. Evils of fat limes. Hydraulic limes. Cements. Description of sand to be used in mortar.

Water.—Salt water, dirty water.

Preparation, and mixing mortar.

Slaking lime.—Quantity, time. Ground lime. Water.

Mixing.—Methods, quantities ; bulk of mortar produced.

Precautions in using mortar.

Concrete.—The matrix. The aggregate. Shape. Size. Aggregates in common use :—Broken brick. Burnt clay. Gravel. Ballast. Slag. Size of aggregate. Voids. *Proportion of ingredients. Mixing :*—Materials all mixed together : mixed separately. Relative advantages of the two methods.

Laying concrete :—In trenches. Under water. *Bulk of concrete produced. Expansion of concrete. Uses of concrete.* Coignet's Béton. *Strength of concrete. Monolithic structures in concrete.*

On the action of foreign constituents in limestones and cements. Fat limes :—Calcination. Slaking. Setting. Mortar. Action of sand. *Hydraulic limes and cements containing clay.* Clay. Lime. Calcination. Proportion of clay. Effect in cements burnt at a moderate temperature. Effect in cements burnt at a high temperature. Composition of clay. Effects caused by different degrees of calcination. Hydraulic limestones. Cement stones containing a small proportion of clay. Cement stones containing a large proportion of clay. Slaking. Setting. Proportion of clay. Composition of clay Pozzuolana. Carbonate of magnesia. Sulphates.

Plasters :—Lime and cement plaster. Gypsum. Plaster of Paris. Stucco.

Asphaltes :—Characteristics of good asphalte. Methods of laying. Uses.

White-wash.

PAINTS AND VARNISHES.

Paints. Distemper. Varnish. Mastics. Glazing. Papering.

TIMBER.

Growth of trees.—Annual rings, medullary rays, sapwood, heartwood, felling, squaring.

Characteristic of good timber.

Defects in timber.—Heartshakes, starshakes, cupshakes ; rind galls, upsets, galls, foxiness, twisted fibres.

Classification of timber.—Pine wood or soft wood, leaf wood or hard wood.

Seasoning timber.—Natural seasoning, water seasoning, boiling and steaming, hot air seasoning, smoke-drying, scorching and charring.

Causes of decay in timber.—Continued dryness ; continued moisture ; alternate dryness and moisture ; continued moisture with heat. Dry rot. Positions in which dry rot occurs. Detection of dry rot. Checking dry rot. Wet rot. Positions in which wet rot occurs.

Destruction of timber by insects.—Destruction by marine animals and white ants, and modes of protecting timber from their attacks.

Preservation of timber.—By good ventilation and obviating moisture. By the use of oil paint. By the application of tar boiled with powdered chalk. Bethell's process of creosoting. Boucherie's process of injecting sulphate of copper. Margary's process. Payne's process.

Measurement of timber.

METALS.

Iron ores.—Blackband. Red and brown hæmatite, magnetic, spathic, argillaceous.

Preparation of ores.—By washing. By roasting in clamps and in the open air.

Smelting.—Description of blast furnace. Hot blast. Cold blast : Flux, slag. Comparative advantages of hot and cold blast iron.

Pig iron.—Foreign substances in pig iron. Carbon in a state of mechanical mixture and in chemical combination with cast iron. Effects of the following impurities upon cast iron, wrought iron and steel :—Silicon, phosphorus, manganese, sulphur.

Cast iron.—Remelting pig iron. Grey and white cast iron, mottled cast iron. To distinguish grey from white. Chilled iron. Malleable cast iron. Toughened cast iron. Descriptions of pig iron for casting in sand. Pattern. Cold shut, core, head, casting pipes, examination of castings, cast iron pipes, tests for cast iron.

Production of wrought iron.

Effect on pig iron of—Refining, puddling, shingling, rolling : contraction of wrought iron, defects in wrought iron, cold short, hot short, or red short.

Tests for wrought iron.—Tensile strength. Ductility. Methods of testing. Tensile tests, forge tests, testing rivets, appearance of fractured surface.

Market forms of wrought iron.

Production of steel.—Amount of carbon in steel. Characteristics :—hardening, tempering. Varieties of steel ; blister steel ; spring steel ; shear steel ; cast steel ; Bessemer process ; Siemens-Martin process ; Basic process.

Hardening and tempering steel.—Table of temperatures and colours. Degree of heat for hardening and methods of cooling. Hardening and tempering in oil.

Case hardening.

To distinguish steel from wrought iron. Testing steel.

Forging iron.—The form to be given to forgings, overheating.

Forging steel.—Shear, blister and cast steel.

Welding.—Wrought iron, steel.

Preservation of iron.—Corrosion, galvanising, painting, Dr. Angus Smith's process for cast iron pipes, Barff's process, Bright's iron work.

2.—CONSTRUCTION.

BRICK-LAYING.

General principles of brickwork. Bond.

Operations of brick-laying. Bond timber objectionable. Mortar joints. Fine joints. Lime putty.

Precautions against settlement. Joining new work to old. String courses and copes. Stone quoins.

Scaffolding.

MASONRY.

General principles of stone masonry. Ashlar. Block in course. Coursed rubble. Common rubble. Rubble backing. Strength of a mass of masonry as depending on the size of stones, the bond, and accuracy in dressing. Bonding—headers and stretchers ; through bonds. Quoins. Direction of beds in battering walls. String courses and copes. Pointing. Drystone masonry. Mechanism for moving large stones.

Instruments used in building. Scaffolding.

EARTHWORK.

Preliminary arrangements to be undertaken by the Engineer. Preparation of plan and sections. Practical stability of earthwork. Of excavation in rocks.

Setting out of earthwork. Base or formation level. Sides or slopes. Half breadths. Computation of volume of a piece of earthwork. Simpson's rule for volumes. Prismoidal formula. Use of

tables in such computations. Setting out. Angles. Centre line. Side widths. On side-long ground. Use of the bevil plumb rule, clinometer, mason's level, and boning staves.

Execution of earthwork. The tools and implements used. Size and form of barrows. Distribution of labour. Dobbin carts. Earth wagons. Boring to ascertain nature of ground.

Cuttings. Equalisation of cuttings and embankments. Side cuttings. Spoil banks. Stripping the soil. The consecutive operations in forming a heavy cutting. The horse run with large barrows. Casting up by stages. Slips. Drainage.

Embanking and puddling. Preferable materials for embankments. Embankments formed in one layer. In two or more thick layers. Settlement of embankments. Side slopes, facing slopes. Embanking in side-long ground. Foundations of embankments. Punning. Trimming slopes.

CARPENTRY.

Joints and Fastenings.

Joints.—Lapping, fishing, scarfing. Different forms of scarf Halving. Dovetails. Notching. Cogging. Mortise and tenon joint. Chase mortises. Circular joints. Bridle joints. Post and beam joints. Strut and beam joints. Tie and brace joints. Suspending pieces. Wedging. Fox-wedging. Keys.

Fastenings. Pinning :—Nails, spikes, trenails, screws. Bolts, washers, plates. *Straps :*—Heel straps, branched straps. Cast-iron shoes and sockets. Tie-beam plates. Shoe for foot of rafters. Double shoe. Socket pieces. Protection of iron fastenings from decay.

Built beams and ribs of timber. Trussed beams of timber.

Floors.—Single floors, double floors, framed floors ; wall plates, templates. Common joists, strutting joists, trimming joists. Floor boards. Ceiling joists. Precautions to be observed in laying floors with respect to door and window openings and partition walls.

Partitions.—General remarks. Framed without doorway. With ordinary doorway in centre. With side door. Common partition. Brick-nogged partitions.

Timber Roofs.—Flat roof. Pitch of roof. Couple roof. Couple-close roof. Collar beam roof. King bolt roof without struts. King post roof. Queen post roof. Purlins. Rafters.

Stairs.—Dimensions of stairs. Rule for proportion of rise to tread. Method of laying out stairs. *Different forms of stairs :*—Straight, dogged-legged, geometrical. *Parts of wooden stairs :*—String-steps. General rules for planning stairs.

Doors and windows.—Ledged doors, ledged and braced doors, panelled doors, glazed doors. Door frames. Fixed sashes. Fanlights. Sashes hung on centres. General arrangements of sliding sashes.

FOUNDATIONS.

Importance of slight and uniform settlement. Various modes of attaining that object. Action of water on foundations. Various conditions dependent on nature of bearing strata.

Importance of ascertaining the character of bearing strata. Trial pits. Borings.

Dry foundations. Rock. Gravel. Sand. Mixed strata of rocks and clay. Shale. Clay. Expansion of clay when exposed. Bearing stratum underlying soft ground of considerable depth. Crust of good ground overlying soft substratum.

Mechanical construction of foundations. Footings. Planking. Use of sand, concrete and béton.

Land foundations on artificial bottom. Consolidation of soft ground by driving piles. Platforms of fascines, timber or concrete, forming floating foundations.

Foundations on good natural bottom under water. Piled foundations. Timber piling. Cast and wrought iron piling. Iron screw piles. Hollow cast iron cylinders. Brick wells, as employed in India. Sand pump. Solid foundations laid under water. Pierre perdue. Random blocks of béton. Béton laid in caissons lined with tarpaulin. Solid masonry built on the natural bottom by divers. Solid masonry in cribs.

Foundations on sites where the water can be temporarily excluded. Solid masonry sunk in caissons on a bottom dredged out and levelled with béton. The same on a piled bottom. Solid masonry built in a cofferdam.

ARCHING.

Names of parts—Different forms of arches. Inverted arches.

Brick arches.—Rough brick arches, axed arches, gauged arches

Arches over openings in wall.—Segmental face arch, semi circular arch, straight arch.

Stone arches.—Ashlar. Rubble.

ROADS.

Fair weather roads in districts liable to inundations. Permanent roads. Resistance of vehicles on roads variously paved. Ruling gradients. Staking out the centre line. Formation. Breadth and cross section. Earthwork. Side slopes. Culverts and drains. Road metalling Paving with stone blocks. Maintenance and repairs. Hill roads. Street paving in towns.

RAILWAYS.

Survey and choice of line. Gradients and curves. Resistance of railway trains on a level straight line. On curves and steep gradients.

Formation of roadway. Earthworks. Formation level. Base Culverts. Regulations about bridges. Level crossings. Fencings Mile posts. Gradient posts.

Permanent way of railways. Gauge of railways. Ballast Timber sleepers. Rails. Chairs. Rail joints, fish joints. Cast iron sleepers. Wrought iron sleepers. Cant of rails. Elevation of outer rail on curves. Sidings. Switches and crossings. Turntables.

Railway stations. Design and arrangement. Classification. Terminal stations. Intermediate stations. Selection of site. Details of terminal stations. Approaches, roads and yards, position of principal buildings. Parallel or side-station system. Transverse or end station system. Goods stations. Goods yard at small stations. Signals.

IRRIGATION WORKS.

Well-irrigation.—Common machinery employed in India for raising water from wells.

Canal-irrigation. Inundation canals.—General rules for the selection of best site for head works. Head sluices. Slope of bed.

Permanent canals.—Sources of supply, amount of water required, slope of bed, discharges of canals, section of channel, alignment of canal. Head works—weirs, regulators, falls, rapids, locks, navigation channels, aqueducts, inlets, level crossings, super-passages.

Distribution of water.—Rajbahas. Modules.

Tank-irrigation.—Site of embankment. Different forms of embankment. Waste weirs. Irrigation sluices.

River inundation and river improvement.—General methods in use to improve the course of streams and to render channels navigable.

3.—ESTIMATING.

General principles of estimating. Rules of mensuration of surfaces and solids.

The student will be exercised in taking out quantities and framing an estimate from working drawings of the following examples :—

A masonry culvert. A portion of road in cutting and embankment. A house. A wooden bridge. An iron bridge. A masonry bridge.

4.—APPLIED MECHANICS.

DEFINITIONS.

Elasticity.—Plasticity and rigidity. Stress, its nature and intensity. Tensile, compressive, and shearing stresses. Positive and negative senses of a stress. Stresses of uniform and variable intensities. Ultimate strength. Factor of safety.

TENSION.

Simple tension.—Work done in stretching a rod. Thin pipes under internal fluid pressure. Strength of prismatic solids under tensile stress when the resultant of applied forces does not coincide with the axis of the solid. Safe tensile co-efficients of various materials.

COMPRESSION.

Classification of bars or pillars under compression :—Very short pillars, short pillars, long pillars, very long pillars. Methods of failure of these classes of pillars. Rondolet's, Hodgkinson's and Gordon's formulæ. Euler's formula. Fairbairn's formula for collapsing of tubes under fluid pressure. General remarks on the applicability of the above formulæ. Safe compressive co-efficients of materials usually subjected to a compressive stress : impact, pile driving.

TRANSVERSE STRAIN.

Proof that the stress at each point varies as its distance from the neutral axis.

Determination of the position of the neutral axis.

Determination of the moment of resistance.

Calculation of moments of inertia of ordinary sections used in engineering construction.

Flanged girders :—Approximate and accurate methods.

Proportion of I beams for equal strength.

Beams of uniform strength.

Bending moments and shearing forces.—(Treated graphically and analytically).

Cantilever under single load at free end.

Cantilever under uniformly distributed load.

Cantilever under uniformly distributed load, and one or more detached loads.

Beams supported at the ends and loaded with detached loads at any point.

Beams supported at the ends and loaded uniformly.

Beams supported at the ends and loaded uniformly, and also with one or more detached loads.

Beams supported at the ends and loaded with a single detached moving load.

Beams supported at the ends, supporting an uniformly distributed moving load of length less than the span.

Beams supported at the ends, supporting an uniformly distributed moving load of length greater than the span.

Beams supported at the ends and loaded at intermediate points.—Conversion of detached loads into equivalent uniformly distributed load.

STATICS OF STRUCTURES.

Framework loaded at the joints.

Triangular frames.—Diagram of forces for a simple triangular frame. Triangular trusses. Cranes and derricks. Sheer-legs and tripods. Effect of the tension of the chain in cranes.

Incomplete frames.—Preliminary ideas. Simple trapezoidal or Queen post truss. General case of a funicular polygon under a vertical load. Suspension chains.

Compound frames.—Compound triangular frames for bridge trusses. Roof trusses in timber. Queen truss for large iron roofs. Diagram of forces in general.

Framework girders.—Warren girders under various loads. N Trusses

Girders with redundant bars—Lattice girders, flanged beams.

Deflection of Beams.

Deflection due to the maximum bending moment. General equation of deflection curve. Elementary cases of deflection and slope. Beams propped in the middle. Stiffness of beams. Stiffest beam that can be cut from a circular log.

Shearing.

Distinction between tangential stress and normal stress. Equality of tangential stress on planes at right angles. Tangential stress equivalent to a pair of equal and opposite normal stresses. Web of a beam of I section. Method of computing the intensity of the shearing stress at any point in a bent solid.

Resistance of Prismatic Solids to Simple Torsion.

Explanation of the phenomena of simple torsion.

A circular section, solid or hollow, most favourable form of prismatic solid for resistance to torsion.

Twisting moment. The limiting intensity of the resistance to torsion is that of the shearing stress.

Investigation of the resistance of a circular prism to torsion round its mean fibre.

The strength of axles subject to simple torsion. Values of the limiting intensity of working resistance to simple torsion for different materials. e

Diameter of a shaft to transmit a given power.

Blockwork Structures.

Stability at a plane joint. Stability of a series of blocks. Centres of pressure or resistance. Line, polygon and curve of pressures. Line of resistance, or polygon of centres of pressures. Moment of stability.

Retaining walls.—Theory of earth pressure. Angle of repose of different soils. Walls supporting a bank of earth with horizontal surface. Surcharged walls. Graphic methods of solution. Determination of the centre of pressure on any joint of a wall supporting a load of earth at its back. Maximum intensity of stress at any joint

in a retaining wall. Minimum intensity of pressure. Tensile stress at a joint. Effect of cohesion of mortar. Connection between maximum intensity of pressure on foundation course and power of resistance of earth foundation. Methods of equalising intensity of stress on foundation courses.

Masonry arches.—Definitions. Curve of pressures and line of resistance. Conditions of stability. Treatment of the weight of loads of different densities. Graphic process of determining the stability and resistance of any proposed arch by drawing the line of resistance. Depth of key-stone.

Stability and resistance of abutments and piers.—Graphic process of determining the position of resultant pressure on any joint of an abutment. Design of piers.

Stability of foundations of structures in masonry and brickwork.

5.—HYDRAULICS.

1. General Principles.

Velocity and volume of flow. Principle of continuity. Flow in a stream. Steady and varying motion of streams. Fluid acting on piston. Theorem of Bernouilli. Hydraulic head.

2. The flow of Liquids through Orifices.

Application of the theorem of Bernouilli. Velocity of flow due to given head. Co-efficient of velocity. Co-efficient of contraction Co-efficient of discharge. Co-efficient of resistance. Connection between co-efficients of velocity and resistance. Discharge from large rectangular orifices. Borda's mouth-piece. Co-efficient of contraction for Borda's mouth-piece obtained theoretically. Incomplete contraction. Cylindrical and conical mouth-pieces. Flow over notches. Triangular notches. Velocity of approach. Application of results to measurement of flow in streams. Francis' formula. Discharge of measured quantities of water for irrigation purposes. Italian and Spanish modules. Other forms of apparatus answering the same purpose. Discharge under varying head. Jet pump. Separating weirs.

3. The Flow of Liquids in Pipes.*

Laws of friction between liquids and surfaces. Froudes' and Unwin's experiments. Loss of head due to friction in pipes. Hydraulic mean depth. Variation of co-efficient with velocity and diameter. Darcy's formula. Hydraulic gradient. Ordinary computations of size of pipes and volume of discharge. Loss of head due to bends, elbows, enlargements, &c.

4. Movements of Water in Canals and Rivers.

Mean velocity corresponding to given gradient. Variation of the co-efficient. Velocity at different parts of the section of the stream. Mean velocity in terms of surface and bottom velocity. Ratio of mean to maximum velocity. Forms of section of channel,

circular, trapezoidal, egg-profile. Most economical section of channel with given side-slopes. Form of section for a constant velocity with varying discharge.

5. Impulse and Reaction of Water.

Pressure of a jet on a plane surface fixed or moving. Energy communicated to the moving surface and efficiency of jet. Velocity of surface for maximum efficiency. Resultant pressure on curved surface, direct impulse and reaction. Condition to avoid loss by shock when jet is received. Condition for least loss of kinetic energy when jet is discharged.

6.—Hydraulic Machines.

Transmission of energy by hydraulic pressure. Power of hydraulic motors. Causes of loss of efficiency in water-pressure engines, pumps, accumulators, and water-wheels.

Principle of momentum as applied to rotating machines ; turning couple equal to the change of moment of momentum.

Speed for maximum efficiency and losses in reaction wheels.

Most efficient speed of turbines. Angles of moving and guiding vanes. Forms of vanes. Losses of efficiency. Regulation of power of turbines. Estimation and graphical representation of the diminution of total and pressure-head in flow through a turbine.

Centrifugal pumps with radial vanes. Speed for given lift with given efficiency. Utilisation of kinetic energy of whirl. Best form and dimensions of spiral chamber. Whirlpool chamber. Centrifugal pump with backward curved vanes. Losses. Volume discharged.

Efficiency of propellers. Jet propellers. Paddle wheel. Screw.

6.—MECHANICAL ENGINEERING.

Description and Construction of the Elementary Pieces of Machines.

Shafting. Couplings. Clutches. Friction clutches. Plummer blocks or pedestals. Fixings, wall boxes, brackets, hangers. Footsteps. Bolts and nuts.

Tooth gearing. Spur wheels. Racks. Bevil wheels. Worm gearing. Modes of fixing wheels upon shafts.

Driving belts. Drums and pulleys. Fixing drums and pulleys upon shafts. Rope transmission. Telodynamic transmission.

Cranks. Eccentrics. Cams. Connecting rods.

Valves. Pistons. Stuffing boxes.

Steam Engine.

Fuel and combustion.—Chemical composition and physical properties of the different kinds of fuel. Calorific value of some elements

and their compounds. Determination of the calorific value of the different kinds of fuel. Process of combustion. Formation of smoke and flame. Losses by incomplete combustion. Air necessary for combustion. Temperature of combustion. Density of burnt gas. Maintenance of draught, by convection; by artificial means. Transmission of heat from furnace gases. Waste of heat. Methods of stoking. Mechanical stokers.

The Boiler.—Types of boilers. Proportions to provide sufficient grate and heating surfaces. Proportions and methods of construction to provide sufficient strength. Construction to facilitate cleaning and examination. Boiler fittings.

The Steam Engine in general.—Types of engines. Horse-power. Relations between dimensions of cylinder, speed of piston or revolution, and power of engine. The design of the principal details of an engine. Piston, piston rod, connecting rod, crank shaft. The slide valve and eccentric. Link motions. Expansion valves. Zenner's valve diagrams. The Indicator and Indicator diagrams. The condenser and air pump.

The Locomotive Engine.—Train resistance. Tractive power. Adhesion. Express and coupled engines. General description of ordinary engines. Goods' engines. Limit of load on wheels. Fatigue of rails. Description of engines for exceptional circumstances. Engines for steep inclines. Engines for exceptionally heavy trains on moderate inclines. Engines for narrow gauge lines. Double traction. Fairlie engines.

General arrangements of engine and boiler. Reversing Expansive working. Webb's compound engine. Brakes. Framing. Axle boxes. Springs. Axles. Wheels. Effect of curves on wear of tires. Provisions for reducing the effect of sharp curves. The tender. Ramsbottom's scoop.

THERMODYNAMICS.

Measurement of temperature and quantities of heat. Relations between pressure, temperature, and volume of steam. Total heat of formation of steam.

External work done during evaporation. Relation between heat and work; Joule's equivalent. Internal work of evaporation.

Operation of a non-expansive working engine. Expenditure of heat and steam. Efficiency. Condensation water.

Calculation and graphical representation of the energy exerted by an expanding fluid. Relation between pressure and volume of expanding steam. Indicator diagram. Mean pressure.

Transmission of heat to and from metal of cylinder when steam is used expansively, and consequent limitation of economical ratio of expansion. Expenditure of heat and steam in expansive working engine. Efficiency. Advantage of steam jacket and superheating. Operation of compound engine. Indicator diagrams. Advantages of compound engine.

Efficiency of thermally perfect air engine. Reversibility. Carnot's principle. Maximum efficiency of any heat engine.

7.—SURVEYING.

LECTURE ROOM COURSE.

(1) Construction of Scales—Simple, diagonal, and vernier.

(2) Useful problems in surveying.—To avoid obstacles in the chain line—

1st.—When the obstacles can be seen over and chained round but not across.

2nd.—When it can neither be seen over nor chained across, but can be chained round.

3rd.—When it can be seen over, but neither chained over nor round.

(3) To find the intersection of two lines meeting in a lake or river, and the distance to the point of meeting.

(4) To find your place in a survey by observation from that position to certain fixed points on the survey—

1st.—With prismatic compass.

2nd.—With pocket sextant.

(5) Investigation of various methods of tracing curves—

(*a*) Without angular instruments—

By chords and offsets.
By offsets from a common tangent.
By successive bisection of arcs.

(*b*) With theodolite—

By angles at the circumference when the point of intersection of the tangents to the curve is accessible.
When the point of intersection is inaccessible.
By two theodolites at starting points of curve.

(*c*) Serpentine curves.

(6) Plotting chain survey.

(7) Plotting survey with chain and prismatic compass.

(8) Plotting theodolite traverse by Gale's method.

(9) Plotting level-sections.

(10) Computation for the reduction of the base line.

(11) Reduction to the centre of angles taken from satellite stations.

(12) Calculation of the sides of the triangles in a trigonometrical survey.

(13) Calculation of the relative vertical heights of the stations as determined by theodolite.

(14) Equalising areas—

(*a*) Of irregular polygons.
(*b*) Of irregular offsets.

(15) Colouring of maps and surveys with the necessary printing of title and drawing of scales.

(16) Colouring of level-sections.

(17) Enlargement or reduction of plans by—

(*a*) Pantograph.
(*b*) Squares.

(18) Methods of entering the topographical details, horizontal and vertical style.

(19) Conventional signs used in surveys and plans.

PRACTICAL ASTRONOMY.

(1) Astronomical definitions.

(2) Determination of the true meridian—

By equal altitudes of a star.
By maximum elongation of a circumpolar star.

(3) Determination of latitude—

By meridian altitude of the sun with sextant and artificial horizon.
By circummeridian altitudes of a star with theodolite.
By observations on Polaris.

(4) Approximate methods of determining the meridian and latitude without the use of angular instruments.

(5) Construction of horizontal sun-dials and method of graduating dial-plate.

(6) Simple methods of determining the longitude in which the use of the nautical almanac is not required.

FIELD WORK.

First-year Class.

A small survey with chain only.

A more extensive survey (Botanic Gardens) with chain and prismatic compass.

A line of levels about two miles long, the same to be carefully checked.

Ground tracing.

[This course should occupy about 32 days.]

Second-year Class.

A line of levels about one mile long, the same being carefully checked.

A survey, about four square miles in area, by triangulation and traverse (Gale's), the details being filled in by plane-table.

Contouring. Laying out curves. Setting out half widths on side-long ground. Erection of profiles for embankments. Adjustments of instruments. Observations for determining the meridian and latitude.

[This course should occupy about 50 days.]

Third-year Class.

Select a line of railway about five miles long ; make a traverse along the same, filling in detailed plan by plane-table. Level over this line, and make the needful cross sections.

[This course should occupy about 40 days.]

8.—DRAWING.

Construction of scales. Geometrical construction. Curves of arches, &c. Descriptive Geometry. Orthographic Projection : Of Planes : Of Solids, under given conditions. Sections of solids. Intersection of solids. Development of solids. Shadows. Isometrical Projection. Perspective. Machinery. Topographical drawing.

WORK TO BE EXECUTED BY STUDENTS.

1. Printing. 2. Scales. 3. Geometrical Figures. 4. Arches. 5. Problems in Descriptive Geometry. 6. Projections and Intersections of Solids. 7. Intersections of Roofs. 8. Elevations, Sections and Plans of buildings and bridges from copies. 9. Ditto from rough sketches and dimensions. 10. Projections of shadows (simple cases) 11. Free-hand sketches—(*a*) from copies, (*b*) from models. 12. A drawing from actual measurement. 13. Machinery. 14. A simple isometric drawing. 15. A simple perspective drawing. 16. Maps, Sections, &c.

9.—PROJECT.

This will consist of the surveys and levels for a line of canal or railway, about 5 miles long, with cross sections of streams crossed, accompanied by designs for such iron and masonry structures as may be required for the streams or roads that are crossed. The whole to be supplemented by a book of calculations showing how the necessary dimensions have been arrived at.

The drawings that will accompany this project are :—

(1) General plan of country showing adopted line.
(2) Longitudinal section of line.
(3) Design for a masonry bridge.
(4) Design for a plate girder bridge.
(5) Design for an open work bridge, such as a Warren, Lattice or Bowstring girder.

The designs will be got up in sufficient detail to enable the bridges, &c., to be ordered without further information.

10.—MATHEMATICS.

ALGEBRA.

Addition, subtraction, multiplication and division of algebraical expressions (including fractions), highest common factor, lowest common multiple, involution, evolution, theory of indices, surds,

simple and quadratic equations involving one or more unknown quantities. Theory of quadratic equations and quadratic expressions. Ratio, proportion, variation. Arithmetical, geometrical, and harmonical progressions. Mathematical induction, permutations and combinations. Binomial theorem, exponential theorem.

TRIGONOMETRY.

Direction of measurement of straight lines or angles denoted by algebraical sign. Measurement of angles by degrees and circular measure. Definition of the trigonometrical ratios and inverse trigonometrical functions. Investigation of formulæ, including all angles which have the same sine, cosine or tangent. Formulæ expressing the sine, cosine or tangent of the sum or difference of two angles, in terms of the trigonometrical ratios of the single angles, with formulæ derived from these. Limiting values of simple trigonometrical functions of an evanescent angle. Sum of a series of sines or cosines of angles in arithmetical progression. Solution of triangles. Properties of triangles. Determination of unknown heights and distances.

APPLICATION OF LOGARITHMS.

(Each candidate will be supplied with a book of mathematical tables, and required to extract all necessary information from the tables.) Properties and use of logarithms. Numerical solution of triangles. Easy questions in algebra, trigonometry, mensuration, statics, dynamics or hydrostatics, involving logarithmic calculation.

MENSURATION.

The areas of plane figures, and the application of Simpson's rule Areas of surfaces. Volumes of solids, including the application of the prismoidal formula.

PLANE GEOMETRY (INCLUDING THE GEOMETRY OF CONICS).

Simple problems in the geometry of the straight line, triangle and circle, treated according to modern methods. The more important properties of the parabola, ellipse, and hyperbola ; sections of a cone. Text-book, Wilson's Elementary Geometry and Conic Sections.

STATICS.

The composition and resolution of forces, acting in one plane on a particle or rigid body. Moments. Bending moments. Conditions of equilibrium of a particle or rigid body acted on by forces in one plane. Force diagram of a system of forces in equilibrium. Meaning of virtual work and work done by a force. Applications of the above to the solution of problems (the candidate to be allowed the option of adopting the graphic method of solution). Equilibrium of constrained bodies and the simple machines. Determination of centroids. Friction.

DYNAMICS.

Kinematics. Velocity and acceleration, uniform and variable. Angular velocity. Numerical value of velocity or acceleration dependent on units of time and space. Relative velocities and accelera-

tions. Composition and resolution of velocities and accelerations. Formulæ connecting time and space described, velocity and acceleration.

Kinetics. Newton's laws of motion. Units of mass, force, and work. Relation between force, mass moved, and acceleration produced. Attwood's machine. Motion of projectiles in vacuo. Direct impact of bodies. Co-efficient of restitution. Constrained motion of bodies sliding down smooth curves. Formula (without proof) for the time of a small oscillation of a simple pendulum. Uniform motion in a circle. Conical pendulum. The principles of work and energy. Conservation of energy.

HYDROSTATICS.

Definition of a fluid, a liquid, a gas. Density and specific gravity of a substance and of a mixture of liquids or gases. Pressure at a point. Equality of pressure in all directions in a fluid. Transmission of fluid pressure. The hydrostatic press. Determination of pressure at any point in a homogeneous liquid. Whole pressure on a surface immersed in liquid. Resultant, horizontal and vertical pressure on an immersed surface. Centres of pressure of parallelograms, triangles, circles, or ellipses immersed in any manner in liquid. Conditions of equilibrium of floating bodies. Boyle's and Gay Lussac's laws for gases. The barometer, thermometer, siphon, common pump, air pump, and diving-bell. The atmosphere, pressure at any height in it. Determination of heights by the barometer. Hydrostatic balance. Hydrometers.

DIFFERENTIAL CALCULUS

Definition of a differential co-efficient. Differential co-efficient of a sum, product, and quotient. Differential co-efficients of simple functions. Successive differentiation. Leibnitz's theorem. Taylor's theorem. Maclaurin's theorem. Expansions of functions. Maxima and minima values of functions of one variable. Differential equation of the tangent and normal to a curve.

INTEGRAL CALCULUS.

Integration a limiting form of summation. Integration of simple functions by parts and by substitution. Integration of rational fractions. Integration between definite limits of forms which are generally integrable.

II.—NATURAL SCIENCE

CHEMISTRY.

Physical properties of the metals used in the arts. Alloys. Behaviour of the metals on being heated in contact with air. Investigation into the cause of their alteration (if any). Oxygen. Nitrogen. Composition of air. Hydrogen. Detonating mixture. Drummond's lime light. Physical properties of carbon, sulphur, phosphorus, boron, silicon. Allotropic modifications. Rapid combustion. Carbon dioxide, sulphur dioxide, phosphorus pentoxide, arsenic trioxide, antimony trioxide. Metallic oxides. Slow combus-

tion. Charcoal; coke. Combination of metals with sulphur, metallic sulphides. Sulphides of carbon and hydrogen. Chlorine, its preparation and properties, metallic chlorides. Chlorides of sulphur and phosphorus. Hydrochloric acid. Bromine. Iodine. Fluorine. Direct combination of metals with bromine and iodine. Bromides, iodides, fluorides. Reduction of oxides by carbon. Manufacture of cast-iron, wrought-iron, and steel. Manufacture of zinc. Reduction by carbon of water. carbonic anhydride, potassium and sodium carbonates. Manufacture of phosphorus. Reduction of sulphides and chlorides. Electrolysis of water. Electrolysis and synthesis of hydrochloric acid. Law of definite proportions. Atoms and molecules. Atomic weights. Chemical notation. Reduction of carbon dioxide to carbon monoxide; combustion of the latter; Siemens' regenerator. Conversion of sulphides into oxides; process of roasting. Conversion of oxides into sulphides and chlorides. Quantivalence. Acids and bases. Formation of salts by the action of acids on bases. Crystals. Crystallographic systems. Water of crystallisation. Solubility of salts. Natural waters. Normal, acid, and basic salts. Formation of salts by the action of acids on metals (chlorides and sulphates). Decomposition of salts by heat. Dissociation. Double decomposition. Preparation of hydrofluoric acid. Principles of alkalimetry and acidimetry. Reduction of salts in solution by metals and by the electric current. Galvanoplastics. Manufacture of the more important oxides, hydroxides, and salts on a large scale (potassium hydroxide, potassium carbonate, sodium carbonate, saltpetre, theory of nitrification, gun-powder, water-glass, rock-salt, borax, epsom salt, quicklime, plaster of Paris, calcium phosphate, alum, glass, earthenware, green vitriol, zinc oxide, copper sulphate, white lead, silver nitrate). Outlines of the metallurgy of lead, tin, copper, silver, gold, platinum, nickel. Galvanised iron. Oxidising action of sulphuric acid. Action of concentrated sulphuric acid on metals. Nitric acid and its action as an oxidising agent. Oxides of nitrogen. Manufacture of sulphuric acid. Oxides and oxyacids of chlorine. Oxidation by ozone, chromic acid, and permanganic acid. Oxyacids of phosphorus. Oxidising action of chlorine. Bleaching powder. Ammonia. Ammonium salts. Phosphuretted hydrogen. Hydrides of arsenic, antimony, and silicon. The simplest hydro-carbons. Coal-gas. Cyanogen compounds. Volumetric analysis of hydrochloric acid, hydrogen sulphide, sulphur dioxide, carbon monoxide, methane. Vapour density. Law of isomorphism. Specific heat. Modes of determining atomic weights. Spectrum analysis; spectra of potassium, sodium, rubidium, caesium, lithium, barium, strontium, calcium, thallium. *Practical course*:—(i) a short course of chemical manipulation as applied to the preparation of the common gases; (ii) a short course of qualitative analysis of the principal acids and bases by wet methods. Quantitative analysis of haematite, limestone, clay, cement, coal.

MINERALOGY.

Elements of crystallography; the simple forms of the six crystallographic systems; Naumann's notation. Crystalline aggregates. Cleavage. Fracture. Tenacity. Scale of hardness. Specific gravity. Colour. Streak. Lustre. Transparency. A short description of the following minerals. *Elements*: diamond, graphite, sulphur

copper, silver, gold, platinum. *Sulphides:* pyrite, marcasite, arsenopyrite, pyrrhotite, galena, chalcosite, blende, chalcopyrite, cinnabarite. *Monoxides:* cuprite. *Sesquioxides:* corundum, haematite. *Dioxides:* quartz, opal, cassiterite, pyrolusite. *Compounds of monoxides and sesquioxides:* spinel, magnetite. *Hydroxides:* goethite, turgite, limonite, psilomelane. *Haloid salts:* halite, cerargyrite, fluorite, cryolite. *Carbonates:* calcite, dolomite, siderite, smithsonite, aragonite, azurite, malachite. *Sulphates:* anhydrite, anglesite, gypsum. *Phosphates:* Apatite. *Silicates:* topas; tourmaline; epidote; olivine, calamine; garnet; leucite, nepheline; muscovite, biotite; ripidolite; talc and steatite, serpentine; pyroxene, amphibol; cordierite, beryl; apophyllite, stilbite, prehnite; the felspars; kaolinite. *Hydrocarbons:* anthracite, bituminous coal, lignite, bituminite, asphaltum, petroleum.

Practical exercises: blow-pipe analysis; identification of specimens by Von Kobell's method. The students are expected to be able to describe hand-specimens given to them and to identify specimens by Von Kobell's method.

Students will be required to give from memory a more detailed description of the most important Indian minerals only.

GEOLOGY.

Object of geology. The relation of geology to mineralogy, chemistry, physics, astronomy, and physical geography. The doctrine of uniformity; its limits; the influence of the doctrine of the conservation of energy. Relation of geology to cosmogony.

Physiographical geology.—The general shape and nature of the globe; the density and probable internal physical condition; evidences of pressure and internal heat. Astronomical behaviour, rigidity, retardation. Effects of solar heat, changes in climates, and in the distribution of organisms. Relation of internal heat to solar heat. Origin of internal heat; its rate of radiation. Isogeothermal lines. Grand outlines of land and sea. Relief of land.

Petrographical geology.—General characters of rocks; structure, composition, state of aggregation. Essential and accessory constituents. Classification of rocks. Description of the more important Indian rocks.

Dynamical geology.—Volcanic phenomena; description of volcanoes—kind, shape, nature, distribution, relation to lines of weak resistance and instability. Theories of vulcanicity. Hot springs. Earthquakes. Secular upheaval and depression. Geological functions of air. Geological functions of water and ice; chemical and mechanical action; denudation and deposition; river valleys; peculiarity of Indian rivers; glacial erosion; formation of lakes. Geological functions of plants and animals; coral islands, Darwin's and Murray's theories.

Petrogenetic geology.—Origin of eruptive rocks; eruptive nature of some granites, of quartz-porphyry, syenite, melaphyre, diabase, and diorite. Origin of sedimentary rocks; minerogen, phytogen, and zoogen sedimentary rocks. Origin of metamorphic rocks; theories of metamorphism; local and regional metamorphism. Ore deposits; veins and stocks.

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Architectonic geology.—Forms of bedding ; surface markings ; concretions ; alternation and association of strata ; overlap. Groups of strata. Joints. Inclination of rocks ; outcrop ; strike. Curvature of strata ; anticlines and synclines ; inversion. Cleavage. Dislocation ; variations in the effects of faults ; groups of faults. Intrusive phase of eruptivity ; bosses, sheets, veins and dykes, necks. Contemporaneous phase of eruptivity ; lavas, tuffs. Unconformability.

Historical geology.—The nature of series, formations. Equivalent strata, absent strata and formations. General outlines of Indian geology. Peninsular area. The metamorphic series, geology and petrography. The transition series, geology and petrography. The Vindhyan series, lower and upper ; geology and petrography ; the Vindhyan basin. The Gondwána system ; geological position and characters ; probable fluviatile origin ; relation of Gondwána basins to existing valleys. Lower and upper groups. Tálchir group ; Karbahári group ; Damúdá series, Barákar group ; Rániganj group ; Rajmahál group. The most important coal-fields of the Gondwána system. General distribution of cretaceous formation of India. The Deccan trap series ; extent, geology, mineralogy, relation to other strata. Laterite and lithomarge ; high-level and low-level laterites ; distribution, origin, and age. Post-tertiary and recent formations ; post-tertiary changes of level ; kankar ; older river gravels and clays. Indo-Gangetic alluvium ; general surface features of the Indo-Gangetic plain. Soils, upland and alluvial soils ; red soil, black soil or regur ; peat.

Extra-peninsular area. Rock-groups of the Salt-range. The general succession of Himalayan formations. The Siwáliks. Coal-fields of Assam. (Nothing in detail). The students are expected to be able to identify specimens of Indian rocks.

12—PHYSICS.

Electricity and Magnetism.

Electrification by friction. Electroscopes. Electrification by induction. Measurement of electrical forces. Torsion balance. Law of force Dissipation. Distribution in simple cases. Hollow bodies. Definition of potential. Lines and tubes of force and elementary properties. The condenser. Capacity of a plate-condenser. Specific inductive capacity. Electric energy. Phenomena of discharge. Plate machine. Electrophorus. Replenisher. Holtz and Voss machines. Attracted disc electrometers. Quadrant electroscope. Atmospheric electricity.

Properties of magnets. Induction. Magnetising. Compound magnets. Circumstances affecting strength of magnets. Distribution of magnetism. Magnetic field and lines of force. Magnetic curves. Laws of magnetic force. Methods of measurement. Diamagnetism. Terrestrial magnetism. Measurement of magnetic elements. Their variations.

Volta's experiments. Voltaic cell. Chemical actions in cell. Batteries, typical forms in common use. Magnetic actions. Galvano-

meters : astatic, differential, sine, tangent, reflecting. Electrolysis. Voltameters. Ohm's law and deductions from it. Electrical testing, simple methods of determining electromotive force, resistance and current-strength. Practical units and their relation to the electromagnetic units. Joule's law. Thermo-electricity, Peltier and Thomson effects, thermo-electric inversion. Electromagnets. Mutual actions between currents and currents, and between currents and magnets. Electrodynamometer. Induction. Lenz's law. Induction coil. Magneto-electric and dynamo-electric machines, Clarke, Gramme, and Siemens. Electromotors, secondary batteries. Transmission of power. The electric light. Elementary principles of telegraphy and telephony.

HEAT.

Definition of temperature and its measure. Expansion, linear and cubical of solids : Ramsden, weight-thermometer. Expansion of liquids, U-tube method, dilatometer ; case of water. Expansion of gases, Regnault. Charles' law. Principles of thermometry. Temperature as measured by the expansion of solids, liquids or gases. Mercurial thermometer. Air thermometer. Thermometers for various purposes. Density of solids, liquids and gases.

Calorimetry. Specific heat of solids and liquids. Method of mixture. Specific heat of gases at constant pressure, Wiedemann. Dulong and Petit's law. Change of state. Solid—liquid ; latent heat, solution, supersaturation, regelation. Liquid—gas : evaporation and ebullition, pressure of saturated vapours (Regnault), non-saturated vapours, liquefaction of gases, latent heat. Density of vapour, steam. Hygrometry. Transmission of heat. Radiation : reflection, refraction, absorption, emission, heat and light. Conduction : simple cases of steady flow across a plate and along a bar. Convection.

LIGHT.

Photometry. Velocity of light. Reflection : plane and spherical mirrors. Refraction plates, prisms, lenses. Dispersion, the spectrum. Achromatism. Optical Instruments. Colour.

Undulatory theory. Reflection and refraction. Interference. Young's experiment. Newton's rings. Double refraction and polarisation, elementary phenomena.

RESOLVED—

That the letter be referred to the Faculty of Engineering.

82. Read a letter from the Officiating Principal, Free Church Institution and Duff College, requesting that, under the circumstances therein stated, the order of the Syndicate awarding the Duff Scholarship to Haripada Ghosh may be cancelled, and that the Scholarship may be awarded to Hemchandra Mitra.

RESOLVED—

That the Duff Scholarship be awarded to Hemchandra Mitra.

83. Read an application from Jotindranath Ray, supported by an affidavit sworn before a Magistrate, praying that the mistake made in stating his age in the Entrance application may be corrected.

ORDERED—

That the necessary change be made in the University records.

84. Read a memorandum from the Inspector of Schools, Behar Circle, recommending that the decision of the Syndicate withdrawing from the Kayastha Jubilee Academy the privilege of sending up candidates for the Entrance examination may be reconsidered.

Read also a further memorandum from the Inspector of Schools, Behar Circle, forwarding an application from the Secretary, Arrah Town School, and recommending that the orders of the Syndicate withdrawing from the School the privilege of sending up candidates to the Entrance examination may be cancelled for the Session 1892-93.

RESOLVED—

That the Inspector of Schools, Behar Circle, be informed that the order of the Syndicate, dated the 20th June, is cancelled, in so far as it concerns the Kayastha Jubilee Academy at Arrah, and that the case of the Arrah Town School may be reconsidered next year if he is then able to recommend it for recognition by the University.

85. Read forty-eight endorsements from the Principal Ripon College, forwarding applications from certain students of the College praying that, under the circumstances stated in the applications, they may be allowed to appear at the B. L. examination to be held in November.

RESOLVED—

That Charuchandra Basu, Haranchandra Gupta, Satischandra Mitra, Kailaschandra Bagchi, Jogendranath Mukerjee, Debendranath Datta, Atulkrishna Datta, Girijabhushan Chatterjee, Lalitmohan Ghosh, Baradaprasad Basu, Sasibhushan Datta, Mahbubur Rahman, Rajanikanta Rudra, Srischandra Ray, Harinath Majumdar, Premtosh Basu, Satyaprasanna Ghosh, Charuchandra Mitra, Nibaranchandra Banerjee, Purnachandra Raychaudhuri, Satischandra De II., Asutosh Chatterjee, Arunoday Bhattacharyya, Rajaninath Maitra, Asutosh Ray, and Abinaschandra Chat-

terjee be admitted to the examination to be held in November next on production of certificates that they have attended 75 per cent. of the lectures delivered between June and November.

That Jogeschandra Chatterjee, Jadunath Chatterjee, Khalibuddin Ahmed, Maniruddin Hyder, Abinaschandra Mukerjee, Jyotiprasad Chatterjee, Gopalchandra Biswas, Nirodbihari Sen, Baburam Basu, Chandrabhushan Maitra, Anantalal Pal, Madhusudan Sinha, Debendranath Banerjee, and Bhubanmohan Sen, be required to attend lectures for a full academical year before admission to the B. L. examination.

That Sureschandra Ray and Harashit Ghosh be required to attend lectures for two full years before admission to the examination.

That the Principal be requested to state the number of lectures actually attended by the following candidates :—Kshirodkrishna Biswas, Haridas Maitra, Nilratan Banerjee, Upendranath Chatterjee, Nagendranath Ray, and also to verify the statement made by Bipinbihari Ghosh that the total number of lectures delivered in three years was only 189.

86. Read five endorsements from the Principal, City College, forwarding applications from Asutosh Chatterjee, Atulkrishna Banerjee, Gobindachandra Bardhan, Jogindranath Ray, and Makundachandra Chakrabarti, praying that, under the circumstances stated in the applications, they may be allowed to appear at the B. L. examination to be held in November.

RESOLVED—

That Asutosh Chatterjee and Jogindranath Ray be admitted to the examination of 1891 on production of certificates that they have attended 75 per cent. of the lectures delivered between June and November.

That Gobindachandra Bardhan and Makundachandra Chakrabarti be required to attend lectures for a full academical year before admission to the B. L. examination.

That the Principal be requested to state the number of lectures actually attended by Atulkrishna Banerjee.

87. Read seven endorsements from the Principal, Metropolitan Institution, forwarding applications from

Harikinkar Thakur, Gopalchandra Mukerjee, Harendranarayan Ray, Tarakinkar Datta, Kaliprasanna Chattoraj, Girischandra Sanyal, and Srikanta Bhattacharyya, praying that, under the circumstances stated in the applications, they may be allowed to appear at the B. L. examination to be held in November.

RESOLVED—

That Tarakinkar Datta, Kaliprasanna Chattoraj, Harikinkar Thakur, and Grishchandra Sanyal be admitted to the examination to be held in November next on production of certificates that they have attended 75 per cent. of the lectures delivered between June and November.

That Srikanta Bhattacharyya, Harendranarayan Ray, and Gopalchandra Mukerjee be required to attend lectures for a full academical year before admission to the B. L. examination.

88. The Registrar asked the Syndicate to revise the rules regarding the duties of the Moderators.

RESOLVED—

That the question be brought up again at the next meeting.

89. The Registrar submitted a list of schools that have passed not more than 20 per cent. of the candidates sent up to the Entrance examination for the last three years.

RESOLVED—

That the following Schools be warned that if they do not do well at the next examination they will be disqualified :—

Bantra H. C. E. School.
Behar H. C. E. School.
Chandernagar School.
Cotton Institution.
Graduates' Institution.
Katak Samayabadi Institution.
Lakshmanath School.
Bara Jaguli H. C. E. School.
Indore Military High School.
Mahestala H. E. School.
Nawab Abdul Gany's Free School.

Northbrook School.
Sil's Free College.
Seoni Mission School.

90. Read a letter from Mr. A. F. Abdur Rahman requesting that he may be appointed a member of the Faculty of Arts in order to enable him to become a member of the Board of Studies in Arabic, Persian, and Urdu.

RESOLVED—

That Mr. A. F. Abdur Rahaman be appointed a member of the Faculty of Arts.

91. Read a letter from the Head Master, Mussoorie School, forwarding the requisite permission from the Registrar of the Allahabad University for admission of C. A. S. Cameron, a Matriculated Student of the Allahabad University, to the F. A. examination.

RESOLVED—

That C. A. S. Cameron be admitted to the F. A. examination, provided he completes a course of two years in an Institution affiliated to this University.

92. Read a letter from the Inspector of Schools, Behar Circle, stating that in his opinion the privilege granted to the Principal of an affiliated Institution and the Head Master of a High School under Public Management, of certifying the private candidates, should, under the circumstances stated in his letter, be abolished, except in the case of candidates passing their test examination under the orders of an Inspector of Schools.

RESOLVED—

That the Syndicate are unable to recommend to the Senate the adoption of the suggestion.

93. Read an endorsement from the Principal, Medical College, forwarding an application from Chandrakanta Chakrabarti, praying that, under the circumstances stated therein, he may be allowed to pass the First M. B. examination.

RESOLVED—

That the Syndicate are unable to grant the request.

94. Read a letter from Babu Asutosh Mukhopadhyay requesting that the following proposal may be submitted for the consideration of the Syndicate :—

"That the Syndicate recommend to the Senate that a committee may be appointed to consider whether it is possible to devise some scheme by means of which greater encouragement may be given by the University to the study of the Indian Vernaculars than has been hitherto done"

RESOLVED—

That the Syndicate cannot accede to the request.

95. The Registrar stated that Hemchandra Sen, who had appeared at the recent examination for Honours in Medicine, taking up the branches Medicine and Surgery, had been declared by the examiners to have passed in Surgery, and to have failed in Medicine.

RESOLVED—

That the result of the examination be published in the *Gazette*.

96. The Registrar enquired whether on account of the *Sibratri* falling on the 26th of February, the date for the F. A. and B. A. examinations was to be changed.

RESOLVED—

That the F. A. and B. A. examinations commence on the 29th February instead of the 22nd.

97. The Registrar enquired whether the rule regarding the remuneration of examiners printed at the bottom of page 128 of the Calendar applied to all examiners, or only to those in Arts.

RESOLVED—

That the rule be taken to apply to all examiners.

98. Read a letter from the Director of Public Instruction, Bengal, suggesting the advisability of introducing a certain number of alternative subjects into the standard of the Entrance examination of the University with the object of facilitating the studies of candidates designed for professional careers.

RESOLVED—

That the letter be laid before the Faculty of Arts for consideration.

99. Read an application from the Board of Directors and Principal, Jaffna College, Ceylon, praying that Jaffna College may be affiliated to this University in Arts up to the B. A. Standard.

RESOLVED—

That an application be made to the Government of India in the Home Department, requesting the Governor-General of India in Council to affiliate the Jaffna College, Ceylon, in Arts up to the F. A. Standard.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 5.

THE 8TH AUGUST, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D L.,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
CHARLES H. TAWNEY, ESQ., C. I. E.
THE HON'BLE SIR ALFRED CROFT, K. C. I. E.
BABU MOHINIMOHAN RAY.
J. S. SLATER, ESQ.
SIR JOHN EDGAR, K. C. I. E., C. S. I.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.

100. The Minutes of the meeting of the Syndicate held on the 20th July, were read and confirmed.

101. Read the following report of the Board of Examiners for the L. E. and B. E. examinations:—

"FROM

THE BOARD OF EXAMINERS
FOR THE L. E. AND B. E. EXAMINATIONS.

TO

THE REGISTRAR, CALCUTTA UNIVERSITY.

The 6th August, 1891.

SIR,

We have the honour to submit, for the approval of the Vice-Chancellor and Syndicate, the results of the L. E. and B. E. examinations.

The number of candidates registered for the L. E. examination was 8, of whom 3 passed, 4 failed, and one was absent; of the successful candidates one was placed in the first division, and two in the second.

The number of candidates registered for the B. E. examination was 4, of whom 2 passed, and 2 failed; of the successful candidates one was placed in the first division, and one in the second.

The examinations have been conducted in accordance with the instruction contained in our letter of appointment.

We have the honour to be,
Sir,
Your most obedient servants,
(Sd.) J. S SLATER.
,, C. LITTLE.
,, W. BANKS GWYTHER.

Read also the following letter from Mr. Banks Gwyther, Examiner in Engineering :—

To

THE REGISTRAR, CALCUTTA UNIVERSITY.

DEAR SIR,

I send herewith the results of the papers I examined in the L. E. and B. E. examinations In "Details of Construction" and "Roads and Railways" I increased the original marks by 10 per cent. owing to the poorness of the results on the whole, and as one or two questions on subjects of interest to the profession were not touched, although something ought certainly to have been known about them. For instance, no one described the principles on which the Jubilee Bridge was constructed, nor knew any thing about the Forth Bridge !

Another cause of the unsatisfactory results is the lamentable weakness right down the line in sketching. An Engineer who cannot sketch fairly is like a man deprived of the power of speech. When I examined last year in Drawing I had occasion to make similar remarks and to point to the necessity of training the students to a readier and more accurate use of their instruments, and of the pencil especially.

Yours faithfully,

(Sd.) W. BANKS GWYTHER."

RESOLVED—

That the names of the successful candidates be published in the *Gazette.*

RESOLVED ALSO—

That a copy of Mr. Banks Gwyther's letter be forwarded to the Director of Public Instruction for information.

The following are the names of the successful candidates :—

B. E.

FIRST DIVISION.

Das, Girischandra ... Civil Engineering College.

SECOND DIVISION.

Lahiri, Mohinimohan ... Civil Engineering College.

L. E.

FIRST DIVISION.

Sedgley, G. J. St. C. .. Civil Engineering College

SECOND DIVISION.

In order of merit.

Mukhopadhyay, Upendranath ... Civil Engineering College.
Khastgir, Satyaranjan ... Ditto

102. Read the Proceedings of the meeting of the Board of Studies in English held on the 21st July.

RESOLVED—

That the following selections and books be prescribed as text-books in English for the examinations of 1893 and 1894 :—

ENTRANCE EXAMINATION, 1893.

English Selections appointed by the Syndicate for the Entrance examination of 1891, published by Messrs. Thacker, Spink & Co., the following portions :—

TO BE READ.

Prose.

The Battle of Bannockburn.
The Battle of Killiecrankie.
Escape of Prince Charles.
Death of Sir Philip Sidney.
Battle of Sedgemoor.
Isaac Newton.
Life of the Rev. Robert Walker.
Life of Captain James Cook
Life of King Alfred.
Life of Heyne.
History of the Abolition of the Slave Trade, by Granville, Sharp, Clarkson and Buxton.
Anecdotes of Lord Exmouth.
Anecdotes of Lord Collingwood.
Account of Howard, the Philanthropist.
Anecdotes showing the humanity of Sailors.
Account of Fenelon
Account of Mr. Mompesson.
Self-Control.
The Student—His Health.

Poetry.

Epitaph on a Hare.
The Dog and the Water-Lily.
Alexander Selkirk.
Ye Mariners of England.
Alice Fell ; or, Poverty.
Lucy Gray ; or, Solitude.
Casabianca.
A Psalm of Life.

TO BE COMMITTED TO MEMORY.

Epitaph on a Hare.
Alexander Selkirk.
Casabianca.
A Psalm of Life

FIRST EXAMINATION IN ARTS, 1894.

Green.	Readings from English History, Part II.
Sir W. Butler.	Gordon (English Men of Action Series) omitting Chapters II and III.
Blackie.	Self-Culture.
Tennyson.	Enoch Arden.
Scott.	Rokeby.
Goldsmith.	The Traveller.

B. A. EXAMINATION, 1894.

PASS COURSE.

Shakespeare.	Richard III, Midsummer Night's Dream, Julius Cæsar.
Hales.	Longer English Poems, Dryden to Byron, omitting Burns.
Locke.	Conduct of the Understanding (Clarendon Press Series)
Burke.	Regicide Peace, Letters I and II (Clarendon Press Series).
Cowper.	Letters, Golden Treasury Series, pp. 1—163.
Trevelyan.	Selections from Macaulay (Historical Portraits, Literary Criticism and Miscellaneous Extracts).
Ingram.	Elizabeth Barrett Browning.

HONOUR COURSE.

(In addition to the Subjects for the Pass Course).

Spenser.	Faery Queene, Book I,
Ascham.	The Schole-master.
Greene.	Friar Bacon and Friar Bungay.
Lamb.	Essays of Elia, First Series.

Permanent Subjects.

Earle.	The Philology of the English Tongue.
Shaw.	Outlines of English Literature.

M. A. EXAMINATION, 1894.

The books prescribed for the M. A. examination of 1893 (See Minutes for 1890-91, pp. 188-9).

103. Read the Proceedings of the meeting of the Board of Studies in Sanskrit and Sanskritic languages held on the 23rd July.

RESOLVED—

That the following selections and books be prescribed as text-books for the examinations of 1894:—

ENTRANCE EXAMINATION, 1894.

SANSKRIT.

Vidyáságar.	Rijupátha, Part III (17th edition, 1890).

The following books or any others covering similar ground are recommended as text-books in Sanskrit Grammar:—

Vidyáságar. ...	... Vyàkarana Kaumudi, or
Vidyáságar. ...	... Upakramaniká, as translated by Rajkrishna Banerjee, 12th edition, or
Nilmani Mukerjee. ...	... Laghumanjari, or
Herambanath Tattvaratna.	... Vyákarana Sangraha, or
Kalikumar Sarma. ...	... Vyákaranádarsa, or
Kanailal Sastri. ...	... Vyákaranabodha (in Hindi).

BENGALI.

Calcutta University Selections for 1893. Edited by Babus Bankim Chandra Chatterjee, B.L., and Sarada Charan Mitra, M.A., B.L.

HINDI.

Bireswar Chakrabarti.	... Sáhitya Sangraha.
Tulsidas.	... Rámayana, Ajodhyá Kánda.

URIYA.

M. S. Rao. ...	... Prabandhamálá, pp. 1-115.
Ram Narayan Ray. ...	... Kabità Sangraha.

PALI.

Pali Miscellany, by Professor Trenckner (28 pages of text).

Selections from the Játakás. (Professor Fausboll's edition). The Apannakajátaka (36 pages of text).

F. A. EXAMINATION, 1894.

SANSKRIT.

Kálidása.	... Raghuvansa, Cantos I—V.
Bhatti.	... Bhattikávya, Cantos I—V.

PALI.

Játakás (Fausboll's edition) Vaggo I—IV, pages 95—234.

Dhammapada (Fausboll's edition): the First Bhanavaram, pages 1—35.

BENGALI.

For Female Candidates.

Akshay Kumar Datta.	... Treatise on the Hindu Sects, Introduction to Part II.
Hemchandra Banerjee.	... Vritra Sanhára, Part I.

B. A. EXAMINATION, 1894.

SANSKRIT.

PASS COURSE.

Kálidása. ...	... Kumárasambhava, Cantos I—VII.
Mágha. ...	... Sisupálabadha, Cantos I—II.
Bhavabhúti. ...	... Uttararámacharita.

HONOUR COURSE.

(In addition to the subjects for the Pass Course.)

Kálidása.	... Sakuntalá, as fixed in Pandit Iswarachandra Vidyáságar's edition.
Bháravi.	... Kirátárjuniya, Cantos XIII—XIV.

Permanent Subject.

Barada Raja.	... Laghu Kaumudi. Dr. Ballantyne's edition, as reprinted by Lazarus & Co., from p. 1 to p. 282, *i.e.* to the end of Tin'anta.

B. A. EXAMINATION, 1894.

PALI.

The books prescribed for the B. A. examination of 1893.

M. A. EXAMINATION, 1894.

SANSKRIT.

Kálidása. ...	... Vikramorvasí.
Kálidàsa. ...	.. Meghadúta.
Bhavabhúti. ...	... Mahávíracharita.
Súdraka. ...	... Mrichchhakatika.
Visákhadatta. ...	... Mudrá Rákshasa.
Bánabhatta. ...	... Kádambarí, Purvabhága.
Vyása and Sánkara. ...	... Vedánta Sútra and Bháshya, first four Sútras of the 1st Adhyáya, and 1st and 2nd Padas of the 2nd Adhyáya
Gotama and Visvanátha.	... Nyáya Sútra and Vritti, Chapters I—IV
Váchaspati Misra. ..	... Tattva-Kaumudí.
Upanishad.	... Katha, with Sankara Bháshya.
Rigveda.	... Hymns from the Rigveda Sanhita, edited by P. Peterson.
Vyása.	... Bhagavadgítá.
Pánini.	... Vaidika Prakriyá, Kárakа and Samása, as contained in Siddhánta Kaumudí.
Manu.	... Sanhitá (the whole.)
Mammata Bhatta. ...	... Kávya Prakása.

Permanent Subjects.

Max Muller. ..	... Science of Language, Vols. I—II.
Muir.	... Sanskrit Texts, Vol. V.

Students may take up Cunningham's Corpus Inscriptionum instead of one of the following groups :—

GROUP I.

Nyáya Sútra and Vritti (limited as above.)

GROUP II.

Tattva Kaumudí and Vedánta Sútra (limited as above.)

M. A. EXAMINATION, 1894.

PALI.

The books prescribed for the M. A. examination of 1893.

104. Read the Proceedings of the meeting of the Board of Studies in Greek, Latin, French and German held on the 24th July.

RESOLVED—

That the following books be prescribed as text-books for the examinations of 1894 :—

ENTRANCE EXAMINATION, 1894.

GREEK.

Xenophon. ... ... Anabasis, Books III and IV.

LATIN.

Cornelius Nepos. ... ... Selections by G. S. Farnell, M. A. (Macmillan's Elementary Classics.)

Aulus Gellius. ... ... Selected Stories by G. H. Nall, M. A. (Macmillan's Elementary Classics)

Ovid. ... ... Easy Selections by H. Wilkinson, M. A. (Macmillan's Elementary Classics.)

GERMAN.

Hauff. ... ... Die Karavane.

FRENCH.

Souvestre. ... ... Un Philosophe sous les Toits.

F. A. EXAMINATION, 1894.

GREEK.

Herodotus. ... ... Book IV.

Euripides. ... ... Hecuba.

LATIN.

Vergil. ... ... Æneid, Book VI.

Cicero. ... ... De Amicitia, Pro Archia.

FRENCH.

Bowen. ... ... The Campaigns of Napoleon, Jena (Rivington's).

La Fontaine. ... ... Fables, Books III, IV.

B. A. EXAMINATION, 1894.

GREEK.

The books prescribed for the B. A. examination of 1893.

LATIN.

PASS COURSE.

Vergil.	Georgics, III, IV.
Livy.	Books II, III.
Cicero.	Pro Murena.

HONOUR COURSE.

(In addition to the subjects for the Pass Course.)

Horace.	Odes, III, IV.
Tacitus.	Annals, Books III, IV.
Terence.	Adelphi.

Permanent Subject.

Peile.	Primer of Philology.

M. A. EXAMINATION, 1894.

GREEK.

The books prescribed for the M. A. examination of 1893.

LATIN.

The books prescribed for the M. A. examination of 1893.

RESOLVED ALSO—

That *Lazare Hoche*, by Emile de Bonnechose (Cambridge University Press) be prescribed as a text-book in French for the B. A. examination of 1892, in place of the *History of the Egyptian Expedition.*

105. Read the Proceedings of the meeting of the Board of Studies in Mathematics held on the 25th July.

RESOLVED—

That the following text-books be prescribed for the examinations of 1894 :—

EXTRANCE EXAMINATION, 1894.

MATHEMATICS.

Euclid.	* Elements of Geometry, edited by Hall and Stevens, or any other edition covering the same ground.

F. A. EXAMINATION, 1894.

MATHEMATICS.

Euclid.	* Hall and Stevens' edition.
Taylor.	Elementary Geometry of Conics, 7th edition.

* The notes are to be read as elucidating the text of Euclid, and the additional propositions are to be treated as riders

B. A. EXAMINATION, 1894.

MATHEMATICS.

PASS COURSE.

Greaves, ...	Elementary Statics (omitting all articles marked with an asterisk).
Lock.	Dynamics for Beginners.
Maxwell.	Matter and Motion, Chapter III and articles 96, 97.
Besant	Elementary Hydrostatics, Chapters I—VII, and Chapter VIII—paras. 1—8, omitting articles 93, 102, 104 111—121 (or the corresponding portions of S. B. Mukerjee's Elementary Hydrostatics.)

HONOUR COURSE.

The books prescribed for the examination of 1893.

M. A. EXAMINATION, 1894.

MATHEMATICS.

Chrystal.	Algebra, Part II.
Hobson, ...	Plane Trigonometry.
Burnside and Panton. ...	Theory of Equations, Chaps. I—XII.
Salmon.	Conic Sections.
Smith.	Solid Geometry.
Williamson.	Differential Calculus.
Williamson.	Integral Calculus.
Greenhill.	A Chapter in the Integral Calculus.
Forsyth.	Differential Equations, Chapters I—IV, VIII, IX.
Minchin.	Statics, articles 1—218, 235—241, 259—279, 297—301, 315—347.
Williamson and Tarleton. ...	Dynamics, Chapters I—VIII.
Besant.	Hydromechanics, Part I (Hydrostatics).
Basset.	Hydrodynamics and Sound, Chaps. I, II, IV, V.
Heath.	Optics.
Casey.	Spherical Trigonometry, Chaps. I, II, V, IX.
Godfray.	Astronomy.
Newton.	Principia, Sections I, II, III.
Routh.	Rigid Dynamics, articles 1—18, 24, 48—50, 66—213 (or the corresponding portions of Williamson and Tarleton's Dynamics).

RESOLVED ALSO—

That the Syndicate recommend to the Senate :—

(1). That Simple Harmonic Motion be added to the list of subjects under the head "Dynamics" for the B A examination, Calendar p. 36.

(2). That in para. 8 (11) of the M. A. Regulations "Hydromechanics, including the Theory of Sound," be substituted for "Hydromechanics, omitting the Theory of Sound."

106. Read the Proceedings of the meeting of the Board of Studies in Mathematical and Experimental Physics held on the 25th July.

Read also the Proceedings of the meeting of the Board of Studies in Chemistry held on the 31st July.

RESOLVED—

(1.) That the Syndicate recommend to the Senate that in para. 7 B of the B. A. Regulations for the words—

"III.—Physics and the Elements of Chemistry as defined below.
"IV.—Chemistry and the Elements of Physics as defined below,"

be substituted the words—

"III.—Physics and Chemistry as defined below."

(2.) That the Boards of Studies in Physics and Chemistry be requested to propose a definite course in Physics and Chemistry.

(3.) That the appointment of text-books for the Pass Course of the B. A. examination of 1894 be postponed till the above recommendation has been considered by the Senate, and that the following books be prescribed as text-books for the remaining examinations of 1894 :—

F. A. EXAMINATION, 1894.

The books prescribed for the F. A. examination of 1893, omitting the reference to pages in the case of Remsen's Elements of Chemistry.

B. A. EXAMINATION.

HONOUR COURSE.

The books prescribed for the examination of 1893.

M. A. EXAMINATION, 1894.

COURSE A.

The books prescribed for the examination of 1893, with the addition of
Meyer, ... Modern Theories of Chemistry, Parts I and II.

COURSE B.

The books prescribed for the examination of 1893, omitting
Balfour Stewart, ... A Treatise on Heat.

COURSE C.

Preston, ... Theory of Light.
Heath, ... Elementary Treatise on Geometrical Optics.

Helmholtz.	Sensations of Tone, Introduction, and Chapters I—VIII.
Everett.	Vibratory Motion and Sound.
Donkin.	Acoustics, omitting Appendix to Chapter IV, Appendix to Chapter VI, and articles 125, 131, 135, 138—155 162—214.
Glazebrook and Shaw. ...	Practical Physics, Chapters VIII—XX.

Subsidiary Subjects.

Daniell.	Text book of the Principles of Physics, Chapters VII, XIII and XVI, 1st edition, or corresponding chapters of 2nd edition.

107. Read the Proceedings of the meeting of the Board of Studies in Biology and Geology held on the 27th July.

RESOLVED—

That the books Prescribed as text-books for the examinations of 1893 be prescribed also for the examinations of 1894.

108. Read the Proceedings of the meeting of the Board of Studies in Arabic, Persian and Urdu held on the 28th July.

RESOLVED—

(1.) That the text-books in Arabic, for the examinations of 1893, be prescribed also for the examinations of 1894.

(2.) That the text-books in Persian for the Entrance, First Arts and B. A. examinations of 1893 be adopted also for the examinations of 1894, and that the following books be prescribed for the M. A. examination :—

Prose.

Munshi Muhammad Mahdi ...	Durrai Nádirah.
Shams-uddin Faqír	Hadaíq-ul-Balághát.
Saiffí	Uruz.
Abu'l Fazl	Akbarnámah, Vol. I.
Inshai Abu'l Fazl	First Daftar.
Jámi	Qawafi.

Poetry.

Kháqání	Qasáid.
Khusrau	Qiránu-Sádain.
Ferdaúsi	Selections from the Sháhnámáh by Colonel Jarrett, Calcutta, 1880.
Hakím Saná	Hadíqah.
Saib	Diwán.
Habib Qáán	Qasáíd, first half.

(3.) That the text-book in Urdu for the Entrance examination of 1894 and four following years be a book of selections to be compiled by Shams-ul-Ulama Maulavi Ahmad in consultation with Maulavi Muhammad Abdur Rawuf.

109. Read the Proceedings of the meeting of the Board of Studies in Mental and Moral Science held on the 29th July.

RESOLVED—

(1.) That the text-book for the F. A. examination of 1893 be prescribed also for the examination of 1894.

(2.) That the text-books for the B A. examination of 1893 be prescribed also for the examination of 1894, with the substitution of Fraser's Locke (Blackwood's Philosophical Classics) for Knight's Hume.

(3.) That the text-books for the M. A. examination of 1892 be adopted also for the examination of 1893, with the substitution of Christlieb's Modern Doubt and Christian Belief for Fisher's Grounds of Theistic and Christian Belief, which is out of print.

110. The following eight Natural Orders in Botany were appointed for the Preliminary Scientific L. M. S. and M. B. examinations :—

Malvaceæ.
Leguminosæ.
Cucurbitaceæ.
Asclepiadaceæ
Solanaceæ
Urticaceæ
Scitamineæ.
Gramineæ.

111. The following Genera and Orders in Zoology were appointed for the B. A. examination of 1892 :—

1. The Genera of the Vertebrate Order Proboscidea.
2. The Genera of the Invertebrate Order Stomatopoda.
3. The Indian Genera of the Reptilian Order Crocodilia.
4. The Indian Genera of the Avian Order Raptores.

112. Read a letter from the Principal, Royal College, Colombo, requesting that Osmond Vanstaff, a matriculated student of the London University, and James Jayetilaka, who has passed the Senior Local examination of the Cambridge University, may be admitted

to the ensuing F. A examination of this University, without being required to pass the Entrance examination.

RESOLVED—

That the Principal be informed that the students named by him cannot be admitted to the F. A. examination without two years' attendance at lectures in a College affiliated to this University.

113. Read an application from Babu Durgacharan Datta, supported by the written consent of the Registrar, Allahabad University, praying that his brother, Bhabakali Datta, who passed the last Entrance examination of the Allahabad University, may be allowed to go in for the F. A. examination.

RESOLVED—

That Bhabakali Datta be admitted to the F. A. examination, provided he attends lectures for two years in a College affiliated to this University, in which lectures are delivered on the subjects prescribed for the F. A. examination.

114. Read an application from W. Hardie, supported by the written consent of the Registrar, Bombay University, praying that he may be allowed to go in for the next F. A. examination.

RESOLVED—

That W. Hardie be admitted to the F. A. examination provided he satisfies the other requirements of this University.

115. The Registrar enquired what steps were to be taken to give effect to the wishes expressed by His Excellency the Chancellor in his speech at the last Convocation, to give to the graduates residing in the mofussil an opportunity of taking part in the election of Fellows.

RESOLVED—

That in the opinion of the Syndicate it is desirable that the voting papers of graduates who do not appear in person should be filled up in the presence of, and countersigned by, a Magistrate, and that the Registrar request the Secretary to the Government of India in the Home Department to ascertain whether this proposal meets the

wishes of His Excellency the Chancellor, and if so, to issue the necessary instructions to all Magistrates.

116. Read a letter from Babu Asutosh Mukhopadhyay, requesting that the following proposals may be submitted for the consideration of the Syndicate :—

(i.) That the rules relating to Moderators on page 106 of the Calendar for 1891 be abolished.

(ii.) That on page 115, the following be substituted in lieu of Rule 18 :—

"18. Not less than a month before the commencement of the Entrance and F. A. examinations, the Syndicate shall appoint, from among the representatives of the Faculty of Arts, four Moderators. The Moderators, in consultation with the Registrar, shall be empowered to pass candidates who have failed in one subject only in either of the above examinations, by the addition of grace marks. If the Moderators and Registrar are not unanimous on any point, it shall be referred to the Syndicate at their next meeting."

(iii.) That on page 121, the following be added to the Rules for the B. L. examination :—

"The Syndicate shall, in the month of May, appoint a Board of Examiners, of which the President of the Faculty of Law, for the time being shall be *ex-officio* President."

(iv) That similar additions be made to the rules for the Medical and Engineering examinations.

RESOLVED—

That the proposals be adopted.

117. Read an application from Biharilal Datta praying that the fee which he paid for admission to the last M. A. examination may be held to his credit for the next examination.

RESOLVED—

That the Syndicate are unable to grant the request.

118. Read a letter from the Officiating Principal, F. C. Institution and Duff College, reporting that, subject to the sanction of the Syndicate, he has admitted to the College two *unsuccessful candidates* of last year on the 1st of August.

RESOLVED—

That the Principal be informed that the rule requiring students to enter an affiliated Institution before the 1st August does not apply to unsuccessful candidates; such candidates are required to attend for six calendar months only, and therefore may be admitted this year up to the 29th August, *i.e.*, six calendar months before the date fixed for the commencement of the examination.

119. Read a letter from the Principal, Medical College, Calcutta, stating that the Professor of Chemistry will not be able to finish his course of lectures and practical instruction before the last day of March next.

RESOLVED—

That the written examination be held on the date already fixed, and the oral and practical examination in Chemistry postponed till after the 31st March, and that candidates be admitted to the examination subject to the condition of producing certificates that they have completed the Course in Chemistry before admission to the practical examination.

120. Read the following letter from the Board of Examiners for the last B. L. examination :—

"To

THE REGISTRAR, CALCUTTA UNIVERSITY.

SIR,

In reply to your No. 1493, dated the 4th instant, we have the honour to state that we have reconsidered the case of Nrityagopal Kumar, and see no reason to depart from the former decision nor from the principle upon which it was based.

We have the honour to be,
Sir,
Your most obedient Servants,
(Sd.) G. C. PAUL.
,, WILLIAM GRAHAM.
,, P. L. ROY.
,, M. S. SANDEL."

"I am inclined to shew mercy and I would pass the student.

(Sd). JOGESHCHANDRA ROY."

ORDERED—

To be recorded.

121. Read a letter from the Head Master, Kayastha Jubilee Academy, Arrah, forwarding copy of a notice issued by the Head Master, Town School, Arrah, (recently disqualified by order of the Syndicate,) declaring that the school has been authorised by the Allahabad University to send up candidates for the next Entrance Examination, and suggesting that there ought to be some Inter-University Rules.

RESOLVED—

That a list of the schools disqualified by the Syndicate be forwarded to the Registrar, Allahabad University, with a statement of the reason of their disqualification.

122. The following Honours in Medicine remuneration bill was passed :—

Names.	Subjects.	Fee for setting.	Fee for examining written papers.	Fee for oral and practical examinations.	Total.	Income Tax.	Net Amount.
		Rs A P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.
Dr. J. F. P. McConnell ...	Medicine ...	100 0 0	5 0 0	10 0 0	115 0 0	2 15 11	112 0 1
Dr. K. McLeod	Surgery ...	100 0 0	5 0 0	10 0 0	115 0 0	2 15 11	112 0 1
TOTAL ...	—...	200 0 0	10 0 0	20 0 0	230 0 0	5 15 10	224 0 2

123. The following L. E. and B. E. remuneration bill was passed :—

Names.	Subjects.	Fee for setting.	Fee for examining answer papers.	Fee for examining optional papers.	Fee for examining Drawing and Designs.	Total.	Income Tax.	Net Amount.
		Rs A. P.	Rs A. P.	Rs A. P	Rs A. P.	Rs A. P.	Rs A. P.	Rs A. P.
C. Little, Esq.	Mathematics	160 0 0	55 0 0	20 0 0	...	235 0 0	6 1 11	228 14 1
A. Pedler, Esq.	Science	160 0 0	47 8 0	80 0 0	...	287 8 0	7 7 9	280 0 3
W. Banks Gwyther, Esq.	Engineering	160 0 0	50 0 0	40 0 0	...	250 0 0	6 8 2	243 7 10
G. C. Stawell, Esq.	Engineering	80 0 0	25 0 0	40 0 0	...	145 0 0	3 12 5	141 3 7
W. B. Bestic, Esq.	Engineering	160 0 0	50 0 0	...	...	210 0 0	5 7 6	204 8 6
Col. A. D. McArthur	Drawing	80 0 0	25 0 0	...	...	105 0 0	2 11 9	102 4 3
S. F. Downing, Esq.	Practical Drawing	.....	.....	...	108 0 0	108 0 0	2 13 0	105 3 0
J. S. Slater, Esq.	Practical Drawing	.....	.....	...	108 0 0	108 0 0	2 13 0	105 3 0
TOTAL ...		800 0 0	252 8 0	180 0 0	216 0 0	1,448 8 0	37 11 6	1,410 12 6

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

A. M. NASH,
Registrar.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 6.

THE 2ND SEPTEMBER, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,

Vice-Chancellor in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
CHARLES H. TAWNEY, ESQ., C. I. E.
BABU MOHINI MOHAN RAY.
DR. E. A. BIRCH.
SIR JOHN EDGAR, K. C. I. E., C.S.I.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S, F R. S. E.

124. The Minutes of the meeting of the Syndicate held on the 8th August were read and confirmed.

125. The following dates were fixed for the Premchand, M. A., Law, Medical, and Engineering examinations of 1892:—

Premchand Roychand Studentship Examination—the 7th November and following days.

M. A.—the 7th November and following days.

B. L. and Honour Examination in Law—the 7th November and following days.

Preliminary Scientific L. M S, First L. M. S, and Second L. M. S. examinations—the 7th March and following days.

Preliminary Scientific M B., First and Second M. B., and M. D. examinations—the 2nd May and following days.

F. E. examination—the 2nd May and following days.

L. E. and B. E examinations—the 11th July and following days.

126. The undermentioned gentlemen were appointed to look over the answer papers of candidates for the ensuing M. A. examination:—

English ...	Mr. C H. Tawney Mr. H M. Percival. Mr. J. Mahn.
Philosophy	Babu Kalicharan Banerjee. Dr G. Thibaut.
Mathematics ...	Mr. W. Booth Babu Asutosh Mukhopadhyay.

Physics	... Mr. J. Eliot. Mr. A. Macdonell.
Chemistry	... Rai Taraprasanna Ray, Bahadur. Mr. W. McMillan.
Sanskrit	... Mahamahopadhyay Chandrakanta Tarkalankar. Babu Krishnakamal Bhattacharyya. Babu Nilmani Mukerjee. Dr. A. F. Rudolf Hoernle.
Arabic	... Colonel H S. Jarrett.
Persian	... Colonel H. S. Jarrett. Shams-ul-Ulama Shaik Mahmud Gilani

127. The Registrar reported that, in anticipation of the order of the Syndicate, he had asked Dr. Hoernle to set a paper on Cunningham's *Corpus Inscriptionum* for the ensuing M. A. examination.

RESOLVED—

That the action of the Registrar be approved.

128. Read the proceedings of the Board of Studies in History, Political Economy and Geography, dated the 29th August.

RESOLVED—

That the following books be prescribed as text-books for the examinations of 1894 :—

ENTRANCE EXAMINATION, 1894.

History.

R. C. Dutt	... A Brief History of Ancient and Modern India.
Miss Buckley	... History of England for Beginners.

General and Physical Geography.

Christian Vernacular Education Society.	... Manual of Geography.
	OR
Clarke	Class Book of Geography omitting (*a*) all the paragraphs headed "Communications," (*b*) all the paragraphs headed "Historical Sketch."

F. A. EXAMINATION, 1894.

History.

Smith	... Smaller History of Rome.
Fyfle	... Primer of the History of Greece.

B. A. EXAMINATION, 1894.

History.

The books prescribed for the examination of 1893

M A. EXAMINATION, 1894.

History.

The books prescribed for the examination of 1893

RESOLVED ALSO—

That the Registrar be directed to inform Mr R. C. Dutt that his History of India is adopted as a text-book subject to the condition that he supplies an index and at least two maps, one ancient and one modern.

129. Read a letter from the Officiating Secretary to the Government of Bengal, General (Education) Department, conveying the sanction of the Secretary of State for India to the appointment of a Lecturer in Geology at the Presidency College, and enquiring whether a class in that subject consisting of not less than seven students can now be formed in the College.

Read also a letter from the Principal, Presidency College, stating in reply to this office letter No 1562, of the 20th August, that in the advanced stage of the present session it is not desirable to open a class in Geology this year.

RESOLVED—

That a copy of the letter of the Principal, Presidency College, be forwarded to the Secretary to the Government of Bengal, General Department.

130. Read a D. O. letter from Sir Alfred Croft forwarding the following "Notes on the Education of a Mining Engineer" and letter from Dr. Saise recommending a course in Practical Mining :—

"Notes on the Education of a Mining Engineer

THE profession of a Mining Engineer is a mixture of that of a Civil Engineer and a Mechanical Engineer, com-

bined with a special application of particular branches of Science. His work of a Civil Engineering character, in Bridges, Roads, Railways, Surveying, &c., and also in the Machinery he has to deal with and often design for his own special purposes, are generally of a rougher and simpler kind than the like work of a Civil or Mechanical Engineer, and the training that he requires in these departments is therefore necessarily shorn of much of the refinement required for these two professions individually. The Collegiate training should therefore include a judicious combination of that for Civil and Mechanical Engineering; and in Natural Science particular and extended attention would have to be given to those branches of Science, which form the scientific and practical basis of his profession.

It would be impossible to cover in the limited time to be spent at College, in anything like a complete manner, all the studies that are ordinarily included in those for a Mining Engineer. All that can be, and usually is, attempted in such a course is intended to be suggestive rather than complete, and is left for development in his after experience.

Bearing this in mind, the present course for Civil Engineering at Seebpore is of a more extended character than is required for a Mining Engineer, as also is that laid down for Mechanical Engineering. On the other hand, the instruction in Natural Science under either of these heads is neither sufficient nor sufficiently specialised in its character for the purposes of the Mining student.

I note that a suitable modification for the L. E. examination is desired, which implies that the first three years are to be general for the Mining, as at present for the Civil and Mechanical Engineering courses; otherwise I should have preferred beginning at the 3rd year course, not perhaps so much in changing the subjects as in specialising them and adding to them slightly, as the 4th year alone would prove too short for his special studies.

Thus the Surveying for the Civil Engineering class is too extended for, or rather it occupies more time than can be afforded by, the Mining student; he should instead receive instruction in the particular branch of mine or underground Surveying, while more attention should be given to practical Mineralogy and Chemistry, especially the analysis of metalliferous, and their associated minerals,

fireclay, and gases, and compounds commonly met with in mines.

Time for these could be spared from that spent in the more advanced parts of Drawing and other subjects which for the Mining student may be of a more simple character.

The 4th year could then be devoted to his special requirements in a more complete manner. These include Mine Surveying, (planning, plotting, &c.), Geology with special attention to the nature and occurrence of mineral deposits, Metallurgy and the dressing of ores, particularly those the treatment of which falls to the Mining Engineer, and Assaying, that special valuation of metalliferous minerals and products which every mining student should know. (At the Royal School of Mines, no student is granted a diploma in Mining unless he has passed successfully through the course of Assaying in the Metallurgical Laboratory). Principles of mining in its several branches—special attention being given to mining industries existing, or likely to be developed, in India. During this year periodical visits should, if possible, be made to mines.

It will be seen that there is much of a special character in the above outline. Nothing has been entered, however, of in any sense a superfluous nature ; nothing indeed but what every Mining student ought to be familiar with in more or less detail before he enters upon his professional career.

In most Training Schools a course similar to the above is taught with very fair completeness, especially in the branches of Chemical Analysis and Assaying ; indeed, the students leave the school as very decent manipulators, and are at once able to enter upon their duties as such. This is not, however, to be looked for from our Indian students, who enter upon their special studies in a much more backward state than is usual elsewhere, and who have to work in a climate that does not conduce to the vigorous pursuit of the more fatiguing part of their studies. Any curtailment that might be found necessary, however, should not be made in the number of such subjects, but in the amount of each that is taken up. A few good characteristic analyses and assays, selected with a view to giving the student manipulative power, would be preferable to aiming at a more

complete course, which could only mean a smattering, or to taking either branch to the neglect of the other. The industrious student, with manipulative skill, will, in pursuit of his profession, always find opportunities of extending his knowledge, which would be impossible without such skill.

For the teaching of this, however, I would strongly urge the importing of a specialist, one who has gone through a like course at some well organized Mining School, and who has subsequently made himself generally familiar with the work of a Mining Engineer in its various branches. To endeavour to utilise existing teaching material for this special work would, I fear, be simply courting failure.

The following Syllabus of subjects proposed for the L E. examination for Mining Engineer has been drawn up in accordance with the above observations on the educational training for mining students.

ALTERNATIVE COURSE FOR MINING ENGINEER.

I Mathematics.
II. Science, Pure and Applied.
III. Engineering, Constructive
IV. Principles of Mining.
V. Drawing.

I. MATHEMATICS.—

As the *F. E. examination*, together with Hydrostatics.

II SCIENCE, PURE AND APPLIED.—

Mineralogy.—Pure and applied General properties and characters of minerals · their distribution, detection, and the examination of their chemical and physical properties. Petrology Use of the Blowpipe. Preparation and properties of fuels, assaying and estimation of fuels.

Geology.—General principles, Geognosy, Stratigraphical Geology with special reference to the nature and occurrence of mineral deposits, characteristics of the various strata and the fossils relating thereto. Petrography.

Chemistry.—An extension of that laid down for the *F. E. examination*, together with the analysis of metalliferous minerals and compounds, fireclays, &c.

Detection and examination of gases met with in mining operations. Analysis of fuels, &c.

Metallurgy.—As laid down for branch A; particularly for those metals the treatment of which usually falls to the Mining Engineer. Assaying of metals, their alloys, ores, and products.

III. ENGINEERING.—

Mechanism and Practice of Building.—As laid down for branch A, but of a more elementary treatment.

Hydraulic Engineering.—As laid down for branch A.

Motors and Machinery.—Details of the forms, construction and principles of the various steam engines. Hydraulic motors, water wheels, turbines, &c., and compressed air and air-compressing engines used in mining operations, and the machinery used in connection with them. Drilling machines, &c. Use and management of Indicators, Dynamometers, &c.

Applied Mechanics.—As laid down for branch A.

Surveying.—Underground Surveying. Use of the dial for surface and underground work. Planning and plotting. (This would be better as a part of the F. E. examination).

IV. PRINCIPLES OF MINING.—

Preliminary research. Trenching. Costeaning, &c., Deep boring, and apparatus employed in. Tools used in various mining operations. Methods used in ventilating, lighting, and draining mines. Sinking of shafts. Driving levels, &c., and the methods adopted for protecting them by timbering, masonry, &c. Tubbing. Exploiting. The different systems used in working excavations, &c., and the methods employed for securing them while kept open. Management of shafts for hoisting, travelling, and ventilation purposes, and the methods adopted for the prevention of accidents. Management of underground roads, carriage, hauling and transport of minerals, &c. Mechanical preparation and dressing of ores. Different methods of working coal, &c.

V. DRAWING.—

Mine Surveying drawing.

(Sd.) E. F. MONDY, A.R.S.M., F.C.S."

No. 243.

"East Indian Railway.

KURHURBAREE COLLIERIES.

MANAGER'S OFFICE,

Giridih, August 2, 1891.

Subject—TECHNICAL EDUCATION IN MINING.

SIR A. CROFT, K.C.I.E.

DEAR SIR,

WITH reference to our conversation on the above subject, I have to remark, that the following course should make a good useful man ready to enter into practical mining, and to quickly become useful at mining work :—

1. **Drawing** ... Freehand.
   Plane and Solid Geometry, Projection, Isometric and Perspective.
   Machine drawing.
   Architectural drawing
   Tracing of plans, printing and "getting up" plans to look nice.

2. **Mathematics** ... As in F. E examination—Algebra, Geometry, Trigonometry, Mensuration, Analytical Geometry, Statics, Dynamics, Hydrostatics.

3 **Science pure and applied**

Mineralogy .. As in Calendar 1891 Syllabus.

Geology . Do. Do. Do.

Chemistry . As laid down on pages 39-40 of Syllabus, with analysis of fuels and fireclays.

Metallurgy ... As in Syllabus, but with this important addition :—

Coal .. Classifications. Difference between English (imported) coals and country, difference between Bengal coals and Central Province coals, Assam, Burmah, Khost, Dandot, Central Provinces, Hyderabad and Bengal coals.
Coking and coke making, utilisation of small coal, briquettes or regenerative furnaces.
Washing coal.
Types of coke ovens suitable for different Indian coals.

Physics ... As in Syllabus.
Special reference to be made to electric bell signalling.
Special reference to be made to electric light installations.
Special reference to be made to electric transmission of power underground.

4. **Engineering** ... As in pages 22-36.
I see no need of changing this. Underground surveying is so simple that any person who can survey on surface can do so underground after a few days' practice.

5. **Principles of Mining** as laid down by Mr. Mondy will do.

Great prominence should be given to coal mining—especially Indian mining, and to the mechanical engineering of collieries. A Professor should visit Makum, Warora, and E. I. R. Collieries, to see regular systematic work before he compiles his course of lectures. There can be little doubt that the old methods of shafts following lodes in metalliferous deposits will be given up, and straight commodious shafts with first-rate gear will take their place. Coal mining engineering is a century ahead of metalliferous mining, as regards plant and gear.

Practical work in turning, fitting, carpentry and so on should go on yearly. I attach great importance to a man knowing a thing *really*.

To spread this over 3 years, so as to suit all classes of students, you can do better than I can. The special mining lectures need not come on until the last year. As in R. S. M. (Lond.) a student should get a good place in metallurgy to qualify for mining certificate.

Yours faithfully,
(Sd.) WALTER SAISE."

RESOLVED—

That the papers be referred to the Faculty of Engineering.

131. Read a letter from the Under-Secretary to the Government of India, Home Department, intimating that the Rules for election to the Gilchrist Scholarship forwarded with this office No. 1119, dated the 23rd March last, have been approved by the Trustees of the Gilchrist Educational Trust.

ORDERED—

To be recorded.

132. Read a letter from the Assistant Inspector of Schools, Burdwan Division, stating in reply to this office endorsement No. 1089, dated the 25th February last, that Burdwan should be retained in the list of centres for the Entrance and F. A. examinations, and suggesting that the District Magistrate and the Local Deputy Inspector may be asked to make arrangements for, and superintend the examinations, as it is neither convenient nor desirable, for reasons stated in his note to the Director of Public Instruction, that he should be employed to do the work.

RESOLVED—

That the Director of Public Instruction, Bengal, be requested to state whether in his opinion it is advisable that Burdwan should be retained as a centre; and if so, to direct the Assistant Inspector to superintend the examinations at that centre.

133. Read an endorsement from the Principal, Metropolitan Institution, forwarding an application from Ladhuram Agarwala, a student who passed the intermediate examination of the Allahabad University in March last, praying that he may be admitted to the B. A. examination.

RESOLVED—

That Ladhuram Agarwala be admitted to the B. A. examination, provided (1) that he obtains the consent of the Syndicate of the Allahabad University and (2) that he attends lectures for 2 years in an affiliated college in which lectures are delivered on the subjects prescribed for the B. A. examination of this University.

134. Read an application from Dinkar Shivram Bhandarkar, supported by the requisite permission of the Registrar, Bombay University, praying that he may be allowed to go in for the B. A. examination of this University.

RESOLVED—

That Dinkar Shivram Bhandarkar be admitted to the B. A. examination on the production of a certificate

that he has attended a full course of lectures in an affiliated college in which lectures are delivered on the subjects prescribed for the B. A. examination of this University.

135. Read an application from Surendranath Ray, reporting that his brother, Jogendranath Ray, who intended to appear at the ensuing M. A. examination, died on the 18th August, and praying that, under the circumstances, the fee paid by him for admission to the examination may be refunded.

RESOLVED—

That the fee be refunded.

136. Read an application from Kanailal De, B. A. (Allahabad), supported by the requisite permission of the Registrar, Allahabad University, praying that he may be allowed to appear at the M. A. examination of this University in English.

RESOLVED—

That Kanailal De be admitted to the M. A. examination.

137. The Registrar stated that he had received an application from one Suryyakumar Sen asking for a duplicate F. A. certificate, and enclosing in support of his application an evidently false certificate alleged to have been signed by the Principal, Chittagong College.

RESOLVED—

That the Magistrate of Chittagong be requested to ascertain whether the signature of the Principal is a forgery; and if so, that the papers be referred to the Magistrate of Burdwan for investigation.

138. Read a letter from the Head Master, Ranchi Zilla School, forwarding an affidavit sworn before a Magistrate in support of an application from Kamalakanta, praying that the mistake made in stating his age in the Entrance application may be corrected in the records of this office.

RESOLVED—

That the necessary change be made in the University records.

139. The Registrar reported that Bhabaniprasad Niyogi had resigned the Gilchrist Scholarship, and that in order to save time he had requested the members of the Committee appointed by the Syndicate on the 9th May to recommend another candidate in his place.

RESOLVED—

That the action of the Registrar be approved, and that Mr. Tawney and the Hon'ble Mr. Justice Ameer Ali be appointed a Committee under Rule 8 of the Rules for election to the Gilchrist Scholarships.

140. Read a letter from Satischandra De stating that he has a better claim to the Gilchrist Scholarship than Bhabaniprasad Niyogi, who was selected by the Committee and nominated by the Vice-Chancellor.

RESOLVED—

That the Syndicate are unable to interfere with the recommendation of the Committee.

141. Read an application from W. Khemchand, supported by the requisite permission from the Registrar, Allahabad University, stating that since passing the Entrance examination of the University of Allahabad, he has been employed as Head Master of the C. M. High School, Multan, and praying that, under the circumstances, he may be allowed to go in for the ensuing F. A. examination of this University.

RESOLVED—

That W. Khemchand be admitted to the F. A. examination.

142. Read a letter from Lieutenant J. Ramsay, 1st Assistant to the Agent to the Governor-General in Central India, forwarding an application from the Minister to His Highness the Maharajah Holkar, requesting that the New Holkar College may be affiliated to this University in Arts up to the B. A. standard.

RESOLVED—

That the Syndicate recommend to the Government of India that the Holkar College be affiliated up to the B A. standard.

143. Read a letter from the Under-Secretary to the Government of India, Home Department, forwarding copy of a letter from the Secretary to the Government of the North-West Provinces and Oudh, requesting to be supplied in future with 30 instead of 27 copies of the Tagore Law Lectures, and with 3 complete sets of the work if available.

RESOLVED—

That the Syndicate regret that they are unable to comply with the request.

144. Read an endorsement from the Principal, Queen's College, Benares, forwarding an application from Kalipada Sarkar, praying that he may be allowed to take his admission in the second year Law Class of any affiliated institution in Bengal, and that the lectures attended by him for the LL. B. examination of the Allahabad University may be allowed to count towards his B. L. lectures.

RESOLVED—

That the Principal be informed that the rules regarding attendance at lectures for the B. L. examination have recently been changed, and that Kalipada Sarkar must attend lectures for two years before he can be admitted to the examination.

145. Read an application from Kalipada Sarkar, supported by the requisite permission of the Registrar, Allahabad University, praying that he may be allowed to go in for the M. A. examination of this University.

RESOLVED—

That Kalipada Sarkar be admitted to the M. A. examination.

146. Read a letter from Dr. A. F. R. Hoernle forwarding a list of works on Comparative Philology and recommending their adoption as text-books for the Premchand Roychand Studentship examination.

RESOLVED—

That the letter be referred to the Committee appointed to revise the rules relating to the Premchand Roychand Studentship examination.

147. Read a letter from the Inspector of Schools, Presidency Circle, stating his opinion regarding the expediency of recognising the Harinavi High School, and enclosing copy of a report from the local Deputy Inspector, declining to recommend the school for recognition by the University on the grounds (1) that such a step would prove injurious to the interests of sound education and discipline; (2) that the school has been guilty of a breach of the Transfer Rules; and (3) that it has not the means of educating up to the Entrance standard.

Read also a letter from the Secretary, Harinavi High School, giving further particulars relating to the school.

RESOLVED—

That the Syndicate are unable to recognise the Harinavi High School as qualified to send up candidates to the Entrance examination.

148. Read a letter from the Principal, City College, forwarding an application from Lutful Kabir, an intending F. A. candidate, stating that he completed the full course of study at the St. Xavier's College last year, but was detained on account of his failure at the test examination, and enquiring whether, under the circumstances, he will be required again to keep the requisite percentage of attendance this year.

RESOLVED—

That the Principal, City College, be informed that Lutful Kabir must attend lectures for six months before he can be admitted to the F. A. examination.

149. Read a letter from the Under-Secretary to the Government of India in the Home Department, conveying the sanction of His Excellency the Governor-General in Council to the affiliation of the Jaffna College, Ceylon, to this University in Arts up to the F. A. standard.

ORDERED—

To be recorded.

150. Read a letter from Babu Protapchandra Majumdar, a Fellow of the University, requesting permission to use the Senate Hall for holding occasional meetings of the Committee for the Moral Improvement of Young Men.

RESOLVED—

That Babu Protapchandra Majumdar be allowed to use the Hall for the purpose named, provided it is not required by the University for other purposes, as a special case.

151. Read a letter from the Principal, Tejnarayan Jubilee College, Bhagalpur, requesting that a copy of the annual Tagore Law Lectures may be supplied to the College in future.

ORDERED—

That in future a copy of the Tagore Law Lectures be supplied to the Tejnarayan Jubilee College.

152. Read a letter from the Principal, Ripon College, forwarding an application from Rajendranath Raychaudhuri, stating that he was not allowed to go in for the last B. L. examination on account of his being a day too late in sending in his application, and praying that at the ensuing examination he may be allowed to avail himself of the exemption from the payment of a further fee granted by the Syndicate at their meeting held on the 11th April, 1890.

RESOLVED—

That the fee paid by Rajendranath Raychaudhuri be held to his credit for the next examination.

153. Read a letter from Jnanendranath Basu, dated the 2nd September, requesting permission to take his admission into an affiliated College and to count the attendances made during the current year.

RESOLVED—

That the Syndicate are unable to grant the request.

154. With reference to the resolution in para. 85 of the minutes of the Syndicate, dated the 20th July, it was

RESOLVED—

That the term "academical year" in reference to the B. L. examination means the period commencing in June and ending in May.

155. The Registrar enquired whether any fee was to be paid for tabulating the examination results.

ORDERED—

That a bonus of three months' pay be granted to the Registrar.

156 On a reference from the Registrar it was

RESOLVED—

That Rs 330, Rs 210, Rs. 150, Rs 90 and Rs. 75 be paid as bonus to the 1st Assistant, 2nd Assistant, 3rd Assistant, 4th Assistant and 5th Assistant respectively, being three months' pay in each case.

(Confirmed,) A. M. NASH,
GOOROO DASS BANERJEE, *Registrar.*
Vice-Chancellor.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 7.

THE 14TH NOVEMBER, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C.I.E.
CHARLES H. TAWNEY, ESQ., C.I.E
THE HON'BLE SIR ALFRED CROFT, K.C.I.E.
THE HON'BLE MR. JUSTICE AMEER ALI, C.I.E.
J. S. SLATER, ESQ.
DR. E. A. BIRCH.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.
BABU ASUTOSH MUKHOPADHYAY, F.R.A.S., F.R.S.E.

157. The Minutes of the meeting of the Syndicate held on the 2nd September were read and confirmed.

158. The Registrar reported that Mr. J. Mann, having resigned his appointment as M. A. examiner in English, he had, in anticipation of the order of the Syndicate, arranged with Mr. A. C. Edwards, to take his place.

RESOLVED—

That the action of the Registrar be approved.

159 On the result of the last B. E. Examination, the Ambikacharan Chaudhuri Medal was awarded to Girischandra Das.

On the result of the last L. E. and B. E. Examinations, the Trevor Testimonial Medal and Prize were awarded to Mohinimohan Lahiri.

160. On the result of the last Second M B. Examination, the Goodeve Medal was awarded to Surendranath Datta.

161. On the result of the B. A. Examination, the Prasannakumar Sarbadhikari Medal was awarded to Narayan Dajiba Wadegaonker of the Hislop College, Nagpur.

162. Read a letter from the Under-Secretary to the Government of India, in the Home Department, stating in reply to this office letter No. 1530, dated the 12th August, 1891, that the Governor-General in Council approves the proposal made by the Syndicate that all graduates who are unable to appear in person at the Senate House to record their votes for the election of Fellows should be required to fill up their voting papers in the presence of a Magistrate, the papers being counter-signed by the officer in whose presence they are filled, and intimating that the Government of Bengal has been requested to issue the necessary instructions to ensure the suggestion of the Syndicate being properly carried out.

Read also a letter from the Under-Secretary to the Government of Bengal, in the General Department, forwarding copies of a letter to the Commissioner of Police, Calcutta, and of a circular to all Commissioners of Divisions and to the Chief Presidency Magistrate, Calcutta, containing instructions for recording the votes of the M. A's. who may be unable to attend the Senate House to take part in the election of Fellows.

The Registrar reported that in anticipation of the order of the Syndicate he had requested the Government of India to issue similar instructions to all Magisterial officers in the other provinces as well as in the several Native States.

RESOLVED—

That the letters be recorded, and the action of the Registrar approved.

RESOLVED ALSO—

That the following notice be published in the Gazette and the principal daily and weekly papers:—

CALCUTTA UNIVERSITY.

NOTICE.

His Excellency the Chancellor of the University having signified his intention of again allowing the Masters of Arts and holders of corresponding degrees in the other Faculties to fill up some of the vacancies in the Senate by election from among themselves, it is hereby notified that an election of one or more Fellows (the number to be hereafter announced) will be held on Friday, the 1st January, 1892.

Every candidate for election must be nominated by a graduate holding one of the above-named degrees, and no graduate will be allowed to

nominate more than one candidate. The written nominations of candidates must reach the office of the Registrar not later than the 7th December.

On and after the 15th December voting papers containing the names of all the candidates nominated will be supplied on application by the Registrar. These papers must be filled up in the presence of the Registrar at the Senate House on the 1st January between the hours of 10 A.M. and 5 P.M., but graduates who are not able to appear in person before the Registrar may fill up the papers in the presence of a Magistrate, by whom the papers will be countersigned. All such voting papers must reach the Registrar by the 1st January. Graduates who are not personally known to the officer in whose presence the voting papers are filled up must bring with them their diplomas, or other satisfactory proof of identity.

163. Read a letter from Dr. C. J. H. Warden suggesting that a special degree in Sanitary Science may be instituted by this University to encourage its graduates to study the Science in such a comprehensive manner as would be afforded by a curriculum similar to that which obtains in the University of Cambridge for a like degree.

RESOLVED—

That the Syndicate are of opinion that it would be premature to establish such a degree in the absence of any provision for the proper training of candidates.

164. Read a letter from the Secretary to the Gilchrist Educational Trust, stating, in reply to a reference from the Registrar, that the Chairman of the Trust is of opinion that in the new Regulations it was intended to include Medicine under Science.

RESOLVED—

That the Secretary be requested to state whether Rule 3 of the Rules for Election to the Gilchrist Scholarships should be modified so as to make graduates in Medicine eligible for the scholarships.

165. Read an endorsement from the Director of Public Instruction, Bengal, forwarding a letter from the Principal, Ravenshaw College, Katak, requesting that steps may be taken to remove the possibility of the failure of candidates in Sanskrit owing to the inability of the examiners to read answers written in the Uriya character.

RESOLVED—

That a circular be sent to all schools and colleges, informing them that at the examination of 1894, and

subsequent years, candidates will be required to use the Devanagari character in the Sanskrit papers at all examinations.

166. Read a letter from the Director of Public Instruction, Bengal, stating, in reply to this office letter No. 1603, dated the 5th September, 1891, that Lala Banbihary Kapur, the Manager of the Burdwan Raj, having given him an assurance that the Assistant Inspector of Schools deputed to conduct the University examinations at Burdwan will be treated with the respect and attention due to his position, Burdwan may be again constituted a centre of examination, and suggesting that the Syndicate should issue such intimation to the local College authorities as they may deem fit respecting the relation of the officers of the Education Department to the conduct of the University examinations.

RESOLVED—

That Burdwan be again placed in the list of centres and that the Registrar intimate to the College authorities that the University is much indebted to the Assistant Inspector for consenting to undertake an examination which lies outside his regular duties; and that if the College authorities desire the continuance of this arrangement, they will doubtless see the advisability of affording the Assistant Inspector all necessary assistance, and treating him with the consideration due to his position.

167. Read a letter from the Director of Public Instruction, Bengal, forwarding copy of a letter from the Principal, Rajshahye College, suggesting that the Head Master of a School in signing the application of a candidate for the Entrance Examination may be required to exercise some sort of check upon the statement of age made by the candidate, and enclosing copy of his circular, No. 54, dated the 3rd May, 1889, to all Inspectors, Joint and Assistant Inspectors of Schools, intimating that no boy who has attained the age of 14 years should be admitted to any class of a Government High School below the fourth, without the special sanction of the Inspector or the Principal, as the case may be

RESOLVED—

That the Syndicate are of opinion that no advantage would be derived from the adoption of the suggestion.

168. Read a D. O. letter from the Hon'ble Sir Alfred Croft, K.C.I.E., forwarding an extract from a private letter addressed to him by Mr. Justice K. T. Telang, of the Bombay High Court, regarding the mode of distribution of the Tagore Law Lectures, and suggesting that instead of sending a copy of the lectures to each member of the Senate, a notice of the publication of the lectures may be sent to each member, asking him whether he wants to have a copy sent to him.

RESOLVED—

That in future a copy of the Tagore Law Lectures be sent to every member of the Faculty of Law, and a notice to each member of the other Faculties informing him that the lectures have been published, and that a copy will be supplied on application being made for it within three months after the receipt of the notice.

169. Read a letter from the Under-Secretary to the Government of India, in the Home Department, requesting that in future the Government of the N.-W. Provinces and Oudh may be supplied with three more copies of the Tagore Lectures than at present.

RESOLVED—

That three additional copies be supplied as requested.

170. Read a letter from the Under-Secretary to the Government of Bengal, in the Judicial Department, requesting that copies of the Tagore Law Lectures for the years 1882—87 may be supplied to the 2nd Subordinate Judge of Chittagong.

RESOLVED—

That the Syndicate regret that they are unable to comply with the request.

171. Read a letter from the Inspector of Schools, Behar Circle, suggesting that the instructions contained in this office circular, dated the 28th August 1891, regarding the mode of sending in fees and applications of candidates may be printed in the application form, and that private candidates may be required to give their addresses in their applications.

RESOLVED—

That the Syndicate see no necessity to alter the form of application.

172. Read a letter from the Under-Secretary to the Government of India, in the Home Department, conveying the sanction of His Excellency the Governor-General in Council to the affiliation of the New Holkar College, Indore, to this University in Arts up to the B. A. standard.

ORDERED—

To be recorded.

173. Read a letter from the Deputy Secretary to the Government of India, in the Home Department, forwarding copy of a correspondence between H. E the Governor of the French Settlements in India and H. E. the Viceroy, regarding the affiliation of the Chandernagore School to this University in Art up to the F. A. standard.

Read also a letter from the Administrateur Principal of Chandernagore to the address of the Director of Public Instruction, Bengal, to the same effect.

RESOLVED—

That the Administrateur Principal of Chandernagore be informed that an application for the affiliation of the school should be submitted in accordance with the Regulations of the University.

174. Read a letter from the Secretary to the Chief Commissioner of Assam returning, after counter-signature, the application of the Proprietor of the Murari Chand High School for its affiliation to this University up to the F. A. standard, and stating that the Chief Commissioner would be glad if a College were established in the District of Sylhet.

RESOLVED—

That an application be made to the Government of India, in the Home Department, requesting the Governor-General in Council to affiliate the Murari Chand High School in Arts up to the standard of the F. A. Examination.

175. Read a letter from the Officiating Principal, F. C. Institution and Duff College, enquiring whether, in

the case of a student found guilty of answering to the name of another student, a fine and an apology will be considered by the University as a sufficient expiation, and whether such a student will be allowed to appear at an examination.

RESOLVED—

That the Principal be informed that it rests with the authorities of the College to settle all questions of discipline.

176. Read a letter from Narendranath Pal, enquiring whether a candidate who, having served as a *bonâ fide* teacher for two academical years since passing the Entrance Examination, joins some other profession, will be permitted to appear at the F. A. Examination.

RESOLVED—

That Narendranath Pal be informed that the rule in the Calendar applies only to persons who are *bonâ fide* teachers at the time when they appear at the examination.

177. Read a letter from the Rev. A. P. Begg, suggesting that under the circumstances stated in the letter, a notice may be issued to all B. A. Colleges intimating that no earlier edition of Arnold's Selections from Wordsworth than that of 1886 should be used, unless compared with, or supplemented by, that of 1886.

RESOLVED—

That the necessary notice be published in the Gazette.

178. On the motion of Nawab Abdool Luteef, Bahadur, it was

RESOLVED—

That the following alteration in the B. A. Pass Course in English for 1893 be notified in the Gazette :—

For "Bacon—Essays" and "Thackeray—English Humourists" *read* "Bacon—Essays omitting the Essays on Unity in Religion, Boldness, Atheism and Vicissitude."

"Thackeray—English Humourists omitting the Essay on Prior, Gray and Pope."

179. Read a letter from the Principal, Jaffna College, Ceylon, forwarding an application from W. H Bartlett, requesting to be allowed to go in for the F. A. Examination without passing the Entrance Examination, on the ground of his having passed the Senior Local Examination of the University of Cambridge.

RESOLVED—

That the Syndicate recommend to the Senate that W. H. Bartlett be admitted to the F. A. Examination without passing the Entrance Examination, on the ground of his having passed the Senior Local Examination of the University of Cambridge.

180. The Registrar reported that at the recent B. L. Examination, owing to a mistake made by the Press in packing the question papers, two papers had been given out together, and that in consequence of this he had required the candidates to answer a fresh set of questions in Real Property.

RESOLVED—

That the Syndicate approve of the action of the Registrar, but regret that the necessity for it should have arisen.

RESOLVED ALSO—

That in future the Press authorities be directed to print off and pack up all copies of one paper before commencing to print the next.

181. Read an endorsement from the Principal, L. M. S. College, Bhowanipore, forwarding an application from Sureschandra Guha, supported by the written consent of the Registrar, Allahabad University, praying that he may be allowed to appear at the F. A. Examination of this University in 1893.

RESOLVED—

That Sureschandra Guha be admitted to the F. A. Examination of 1893, provided he satisfies the other requirements of the University.

182. Read a memorandum from the Registrar, Allahabad University, stating that he has no objection to

Miss Kate E. Southon being admitted to the F. A. Examination of this University.

RESOLVED—

That Kate E. Southon be admitted to the F. A. Examination in 1893.

183 Read an application from Mr. O. Van Hoff, Assistant Master, Royal College, Colombo, requesting permission to go in for the F. A. Examination in 1893 without being required to pass the Entrance Examination, on the ground of his having passed the Cambridge Local and the London Marticulation examinations.

RESOLVED—

That the Syndicate recommend to the Senate that O. Van Hoff be admitted to the F. A. Examination of 1893 without passing the Entrance Examination, on the ground of his having passed the London Matriculation Examination.

184. Read a letter from Mr. F. C. Everton, Teacher, St. John's College, Rangoon, stating that he passed the F. A. Examination of the Allahabad University in 1891, and requesting permission to go in for the B. A. Examination of this University in 1893.

RESOLVED—

That F. C. Everton be admitted to the B. A. Examination of 1893 without passing the F. A. Examination, provided he satisfies the other requirements of the University.

185. Read an application from Syed Hyder Raza, praying that he may be allowed to go in for the Entrance Examination of 1893 without being required to answer the papers in the second language, on the ground of his having passed several higher standard examinations in Arabic.

RESOLVED—

That the Syndicate are unable to grant the request.

186. Read an endorsement from the Principal, Metropolitan Institution, forwarding an application from Tarakinkar Datta, praying that as he was unable to avail himself of the permission given to him to appear at the

recent B. L. Examination on account of his having already deposited his fee for admission to the M. A. Examination held on the same day, he may be allowed to go in for the next B. L. Examination without further attendance at lectues.

RESOLVED—

That the Principal be informed that Tarakinkar Datta must attend lectures for a full year.

187. Read a letter from Mr. J. P. Archibald, Assistant Master, Municipal Board College, Amritsar, requesting that he may be allowed to go in for the B. A. Examination of 1893 without passing the F. A. Examination, on the ground of his having passed the examination for entrance into the Engineer class of the Thomason Civil Engineering College, Rurki.

RESOLVED—

That the Syndicate are unable to grant the request.

188. Read a letter from Babu Mathuranath, 2nd Teacher, B. E. School, Khagole, enquiring whether a candidate who passed the F. A. Examination in 1891 will be eligible for admission to the B. A. Examination in 1893, after having commenced to serve as a teacher from the month of July, 1891.

RESOLVED—

That the applicant be informed that he cannot be admitted to the B. A. Examination until he has served as teacher for two full years.

189. Read a letter from Babu Dwijendranath Sinha, forwarding copies of his note on the advantages of Stenography, and suggesting its adoption as an optional subject for the University examinations.

RESOLVED—

That the letter be referred to the Faculty of Arts for consideration.

190 Read a letter from Miss Adams, Head Mistress, La Martiniere College for Girls, suggesting that French may be continued as a second language for the B. A. examination of female candidates.

RESOLVED—

That the letter be referred to the Faculty of Arts for consideration.

191. Read an endorsement from the Inspector of Schools, Behar Circle, forwarding a representation from the Members of the Managing Committee, Town School, Arrah, and recommending that the school may be authorised to send up candidates to the Entrance Examination of 1893.

RESOLVED—

That the Inspector of Schools, Behar Circle, be informed that the Arrah Town School will be allowed to send up candidates to the Entrance Examination of 1893.

192. Read a letter from the Officiating Deputy Secretary, Bank of Bengal, intimating that the Calcutta Municipal Debentures of the 6 % Loan of 1871, aggregating to Rs 2,000 and standing to the credit of the Registrar, will be paid off at par on the 1st of January next, and requesting instructions before that date regarding the re-investment of the amount.

RESOLVED—

That the Deputy Secretary, Bank of Bengal, be requested to purchase other Municipal Debentures as soon as opportunity offers.

193. Read the proceedings of a meeting of the Boards of Studies in Mathematical and Experimental Physics and in Chemistry held on the 14th November.

RESOLVED—

That the Syndicate recommend to the Senate that the following definitions of the Pass and Honour Courses in Physics and Chemistry be adopted :—

The Pass Course in Physics shall include—

(*a*) *General Ideas*—

1.—Wave motion :—

Measurement of simple or harmonic wave motions.
Combination of wave motions.
Resolution of complex wave motions into simple or harmonic wave motions.

2.—Potential :—

Definition of potential.
Calculation of potential in simple cases.
Determination of force from potential.
Fundamental propositions respecting lines of force, equipotential surfaces, and tubes of force.

3.—Elasticity :—

Definition of elasticity.
Measurement of elasticity in the case of solids, liquids and gases.
Distinction between, and determination of, elasticity of constant emperature and of constant entropy for gases.

(*b*) *Heat*—

A more thorough acquaintance with the subject than that required for the First Arts Examination and a greater power of working problems on heat.

(*c*) *Light*—

In this subject more difficult questions in the determination of foci, focal lengths, &c., will be required than for the First Arts Examination.

(*d*) *Frictional Electricity*—

This subject must now be taken up in connection with potential.

(*e*) *Sound*—

The laws of the production and propagation of sound determined experimentally.
Intensity, pitch, and quality of sounds.
The velocity of sound in air and other media: Doppler's principle.
Reflection and refraction of sound.
Measurement of sound vibrations and wave lengths of air.
Resonance.
Interference of sound waves. Beats.
Harmonic tones ; their generation and function in sound.
Longitudinal vibration of rods and of columns of air.
Transverse vibration of strings.
Formation of Chladni's figures.
Vibrations of tuning-forks and bells.
Nature of musical sounds.
Vocal organs of man.

(*f*) *Dynamical Electricity*—

Voltaic batteries as sources of electric currents.
Action of currents on magnetic needles. Galvanometers.
Thermo-electric currents.
Definition and measurement of electric force, conductivity, resistance, and current.
Ohm's law, and its simpler applications.

Laws of action of currents on currents, and their simpler applications.

Solenoids. Ampère's theory of magnetism.

Electro-magnets.

Mechanical, chemical, and heating effects of currents. Electrolysis.

Induced currents, their modes of generation and laws of action.

Ruhmkorff's coil.

Electro-magnetic currents.

Electro-magnetic machines; the more important details of the working of telegraphs.

Theories of electricity.

(*g*) *Magnetism*—

Properties of permanent and artificial magnets.

Magnetic induction.

Phenomena of terrestrial magnetism.

Determination of declination, dip, and intensity of the magnetic force of the earth.

The compass needle.

Methods of magnetisation.

Determination of magnetic laws of action by the torsion balance.

Magnetic potential.

(2) The Pass Course in Chemistry shall include—

(*a*) The following general considerations :—

Definition of Chemistry; differences between chemical action and the action of the physical forces; simple and compound matter; different modes of chemical action; principles of chemical nomenclature; laws of chemical combination; the atomic theory; determination of molecular and atomic weights; symbolic notation; a fairly complete knowledge of atomicity or quantivalence; artiads, perissads, &c.; variations of atomicity; absolute, latent, and active atomicity; graphic notation; chemical equations; calculation of formulæ; compound radicals; classification of elements; relations between atomic weight and quantivalence; physical and chemical relations of atomic weights; specific or atomic volumes; molecular volumes; chemical affinity; influence of pressure on chemical action; relations of heat to chemical affinity; thermo-chemistry; isomerism and allotropy; solution.

(*b*) A fairly complete knowledge of the modes of occurrence, methods of preparation, properties, uses, and general characters of the following non-metallic elements, of their allotropic modifications, and of their principal and best known compounds :—

Hydrogen, fluorine, chlorine, bromine, iodine.

Oxygen (and ozone).

Boron.

Carbon, silicon.

Nitrogen, phosphorus, arsenic.

Sulphur.

(*c*) *A general knowledge of*—

The distinction between metals and non-metals ; physical properties of metals ; chemical relations of metals ; alloys ; acids, bases, and salts ; the constitution of salts ; theory of normal, acid, and basic salts ; general characters and general methods of preparation of compounds of metals with non-metals ; the principles of crystallography ; isomorphism ; outline of the principles of qualitative analysis.

(*d*) A knowledge of the methods of preparation, properties, and uses of the following metals and principal salts :—

Sodium, potassium, ammonium, silver.

Calcium (glass manufacture, &c.), magnesium, zinc, copper, mercury.

Gold.

Lead, tin, platinum, aluminium (porcelain, pottery, &c.) antimony, bismuth.

Chromium, manganese, iron.

(3) The Honour Course in Physics shall include in addition to the subjects of the Pass Course—

(*a*) *Heat*—

An elementary knowledge of the principles of thermodynamics.

(*b*) *Light*—

Spherical aberration.
Dispersion.
The formation of rainbows.

(*c*) *Polarization of Light*—

Undulatory theory of light.
Reflection and refraction of light.
Prismatic analysis of light.
Achromatism.
Explanation of lines in the solar and other spectra.
Interference of light.
Diffraction of light.
Measurements of wave lengths of light.
Colours of thin plates.
Double refraction.
Polarization of light by reflection, refraction, and double fraction.
Interference of polarized light as shewn by double refracting crystals. Polariscopes.
Elliptic and circular polarization.
Rotary polarization.

(4) The Honour Course in Chemistry shall include in addition to a fuller knowledge of the subjects of the Pass Course—

Inorganic Chemistry—

(*a*) Study of the following elements :—

Selenium, tellurium, lithium, cæsium, rubidium, barium, strontium, the earth metals, cadmium, indium, gallium, titanium,

vanadium, uranium, tungsten, molybdinum, nickel, cobalt, and the platinum metals.

(*b*) A knowledge of the methods used in the preparation of the more important acids, salts, &c., employed in the arts and manufactures.

(*c*) A knowledge of metallurgical operations, such as are employed in the preparation of iron, zinc, copper, lead, tin, mercury, silver and aluminium.

Organic Chemistry—

(*a*) The following general considerations :—

Definition of organic bodies, synthesis from inorganic materials, decompositions and transformations of organic compounds, analysis of organic bodies.

Determination of the specific gravity of gases and vapours.

Determination of empirical, rational, and constitutional formulæ ; theory of types, classification of organic compounds, organic series, constitutional formulæ of organic compounds.

(*b*) Isomerism, metamerism, and polymerism, physical properties of organic compounds.

A knowledge of some few typical compounds in each of the different classes of organic compounds.

194. The following contingent Bills were passed :—

FEE FUND.

1 Bill	Pankha puller's wages for the month of May 1891	4	0	0
2 Bills	Reporter's fee for reporting the Senate meetings	50	0	0
2 ,,	Collector to the Corporation—House, Water, Lighting and Taxes, 1st qr., 1891-92 ...	292	8	0
2 ,,	Do. do., 2nd qr., 1891-92 ...	292	8	0
1 Bill	Comptroller and Auditor-General—Fee for auditing Accounts of the University for the year ending 31st March, 1891 ...	250	0	0
	Postage	0	5	6
1 ,,	Freight, &c., &c.	15	1	0
1 ,,	Messrs. Thacker, Spink and Co., Books ...	8	14	0
2 Bills	Do. do. Prize books...	200	0	0
1 Bill	Do. do. books ...	165	11	0
1 ,,	Do. do. do. ...	365	3	6
1 ,,	Messrs. Traill and Co., for a packet of pins	2	6	0
2 Bills	Collector of Stamps for Service Labels	200	0	0
1 Bill	Manager Catholic Orphan Press, for printing miscellaneous work	84	8	0
	Carried over Rs. ...	1,931	1	0

		Brought forward Rs. ...	1,931	1	0			
1	Bill	Messrs. Mackenzie, Lyall and Co.—Advertisement	5	0	0			
1	,,	Duftry for supplying voucher file and cloth mounting Map of India	4	6	0			
1	,,	Superintendent of Stationery for stationery articles ...	33	0	0			
1	,,	Expenses incurred during the examination held at Kandy ..	59	15	0			
1	,,	Superintendent, B. M. Press, Commission ..	4	2	0			
1	,,	Do. Do for printing ... examination papers ...	118	6	0			
1	,,	Do. for printing Minutes, 1890-91	1,053	8	0			
1	,,	Do. for printing Bengali Selections	281	5	6			
2	Bills	Nabakrishna Bhattacharyya, Press Reader for Bengali Selections ..	74	0	0			
1	Bill	Jogendranath Ray—Refund of fee...	50	0	0			
1	,,	Gupteswarnath—Refund of duplicate fee	2	0	0			
1	,,	Messrs. W. Newman and Co., for printing miscellaneous work...	52	12	0			
1	,,	Do. do. do. ...	34	0	0			
1	,,	Proprietor, Empress of India Press, for printing examination papers	5	12	6			
1	,,	J. Calarman for ink	0	8	0			
1	,,	Duftry for binding results book ...	1	0	0			
1	,,	Contingencies	9	3	9			
1	,,	Do.	14	1	6			
1	,,	Do.	2	14	6			
1	,,	Superintendent, Government Printing, for printing miscellaneous work	512	9	6	4,249	9	3
		ACCOUNT TAGORE FUND.						
1	Bill	Superintendent, B. M. Press, for printing Tagore Law Lectures for 1888 ...	1,413	4	0			
1	,,	Do. do. do. 1889 ...	1,274	0	0			
1	,,	"Pioneer" Press—Advertisement	8	5	0			
1	,,	"Bengali" do. ...	9	12	0			
1	,,	"Reis and Rayyat" do. ...	10	0	0			
1	,,	"Hindu Patriot" do. ...	8	8	0			
1	,,	"Englishman" do. ...	8	12	0			
1	,,	"Statesman" do. ...	8	12	0			
1	,,	"Indian Mirror"— do. ...	4	12	0			
1	,,	"Madras Mail" do. ...	12	6	6			
1	,,	"Bombay Gazette" do. ...	17	8	0			
1	,,	"Indian Daily News" do. ...	8	12	0			
1	,,	Collector of Stamps for Service Labels	100	0	0			
2	Bills	Messrs. Thacker, Spink and Co.—Freight	50	0	0			
		Carried over Rs. ...	2,934	11	6	4,249	9	3

		Brought forward Rs. ...	2,934	11	6	4,249	9	3
1	Bill	Coolies	0	7	6			
1	,,	Do.	0	8	6			
1	,,	Contingencies	0	13	6	2,936	9	0
		ACCOUNT JAYNARAYAN FUND.						
1	Bill	Rakhaldas Bhattacharyya, Prize...				9	13	9
		ACCOUNT PACHETI PRIZE FUND.						
2	Bills	Messrs. Chatterjee Brothers & Co, Prize				90	0	0
		ACCOUNT PHILIP SMITH FUND.						
1	Bill	S C. Addy, Prize Books ..				39	14	4
		ACCOUNT KESHAB FUND.						
1	Bill	S C. Addy, Prize Books ...				80	0	0
		ACCOUNT SARADAPRASAD FUND.						
3	Bills	Messrs. Chatterjee Brothers, Prize Books				75	0	0
		ACCOUNT LIBRARY FUND.						
1	Bill	S. C Addy, Book				2	1	3
		Total Rupees ...				7,482	15	7

A. M. NASH,
Registrar.

(Confirmed),

GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES
OF
THE FACULTY OF ARTS
FOR THE YEAR 1891-1892.

No. 2.

THE 18TH NOVEMBER, 1891.

Present:

THE VERY REV. FATHER E. LAFONT, S.J., C.I.E., *in the Chair.*

NAWAB ABDOOL LUTEEF, BAHADUR, C.I.E.
CHARLES H. TAWNEY, ESQ., C.I.E.
THE HON'BLE SIR ALFRED CROFT, K.C.I.E., PRESIDENT.
MAHAMAHOPADHYAY MAHESCHANDRA NYAYRATNA, C.I.E.
A. M. BOSE, ESQ.
A. PEDLER, ESQ.
F. J. ROWE. ESQ.
A. M. NASH, ESQ.
BABU KRISHNABIHARI SEN.
REV. K. S. MACDONALD, D.D.
THE HON'BLE SIR HENRY HARRISON, KT., C.S.
BABU GAURISANKAR DE.
MAULAVI SERAJ-UL-ISLAM, KHAN BAHADUR.
RAJA PIYARIMOHAN MUKERJEE, C.S.I.
H. M. PERCIVAL, ESQ.
BABU ISANCHANDRA BASU.
BABU BHOLANATH PAL.
BABU NILMANI MUKERJEE.
NAWAB MIR MOHAMED ALI.
DR. C. J. H. WARDEN.
THE VERY REV. FATHER A. NEUT, S.J.
N. N. GHOSE, ESQ.
A. F. M. ABDUR RAHMAN, ESQ.
BABU CHANDRANATH BASU.
J. H. GILLILAND, ESQ.
BABU HARAPRASAD SASTRI.
SHAMS-UL-ULAMA MAULAVI AHMED.
BABU UMESCHANDRA DUTTA.
BABU RAJANINATH RAY.
J. C. BOSE, ESQ., B.SC.
BABU ASUTOSH MUKHOPADHYAY, F.R.A.S., F.R.S.E.
THE VEN'BLE ARCHDEACON F. R. MICHELL.
BABU SYAMACHARAN GANGULI.
BABU BEPINBIHARI GUPTA.
BABU JOGINDRACHANDRA GHOSH.
BABU MAHENDRANATH RAY.

195. The Faculty met at the request of the Syndicate to consider the following letter from the Director of Public Instruction, Bengal :—

No. 379~~2~~.

"FROM SIR ALFRED CROFT, K.C.I.E.,

Director of Public Instruction, Bengal,

TO THE REGISTRAR, CALCUTTA UNIVERSITY,

Dated Darjeeling, the 30th June, 1891.

SIR,

BY direction of His Honour the Lieutenant-Governor of Bengal, I have the honour to address you on the

question of the advisability of introducing a certain number of alternative subjects into the standard of the Entrance Examination of the University, with the object of facilitating the studies of candidates designed for professional careers; and to request the favour of your laying this letter before the Syndicate for its consideration.

2. You will remember that in his letter No. 1810, dated the 18th March 1886, to your address, Mr. Tawney, then officiating as Director of Public Instruction, proposed for the consideration of the University a scheme for an alternative practical Entrance Examination. This was dealt with by the Senate at its meeting of the 18th December, 1886, when the following resolution was passed :—

'That an alternative Entrance Examination be not introduced at present, and that the question of including the elements of Physics, Chemistry and Drawing in the Entrance Examination be referred to the Special Committee now sitting with regard to that examination.'

The question was fully discussed by that Committee and by the Senate; and the final result was that the following changes and additions were made in the Entrance course. It was resolved (1) to issue, for the guidance of teachers and examiners in English, an instruction 'that English grammar and composition should be studied by Entrance students more with a view to be able to write plain English, than with a view to learn the philology of the English tongue;' (2) to add present-worth, discount, and stocks to the subject of arithmetic; (3) to prescribe Huxley's Primer of Science as an introduction to Professor Geikie's Physical Geography, the authorised text-book in that subject; (4) to institute an optional examination in Drawing. The result of all these changes is, in my opinion, to make the Entrance Examination a much more suitable test of general education, not necessarily for candidates entering the University, but certainly for those whose education stops at that point.

3. The Government of India has not ceased to pay attention to the important question of an alternative practical examination; and in a communication recently made to the Government of Bengal, it described the action which had been taken in this direction in Madras and Bombay. Briefly the result is this.

In Madras an alternative, or rather correlative examination, under the title of the 'Upper Secondary Examination' has been established, not by the University, but by the Government, 'for the purpose of encouraging secondary and technical education, of improving its character, and of widening its scope.' The scheme of examination comprises the following branches:—

A.—COMPULSORY SUBJECTS.

I.—English.
II.—A second language (classical or vernacular).
III.—Mathematics (arithmetic, algebra to simple equations, elementary geometry).
IV.—History (Outlines of Europe, England from 1558, and British India) and geography.

The foregoing subjects are defined in such a way as to give them an essentially 'practical' turn, in somewhat marked contrast to the 'literary' character of the matriculation examination in the same branches.

B.—OPTIONAL SUBJECTS.

1. Mathematics (preliminary examination).
2. Practical Geometry.
3. Mensuration.
4. Hydraulics and Hydraulic Engineering.
5. Building materials and construction.
6. Plan-drawing from specification and estimate making.
7. Surveying and levelling.
8. Earth-work and road-work.
9. Bridge-making.
10. Mechanical drawing.
11. Heat and Light.
12. Inorganic Chemistry.
13. Physiography.
14. Agriculture.
15. Animal Physiology.
16. General Biology.
17. Veterinary Surgery and Medicine.
18. Botany.
19. Forestry.
20. Hygiene.
21. Drawing.
22. Modelling.
23. Wood and copper-plate engraving and etching.
24. Printing.
25. Book-keeping by single and double entry.
26. Phonography.
27. Annuities and life insurance.
28. Correspondence and business transactions.
29. Banking and political economy.

In order to gain a certificate, a candidate must have passed in all the compulsory subjects and in any three of the optional subjects, and must also have qualified in one of the vernacular languages of Southern India. The certificate is accepted, for the purposes of the public service, as equivalent to the First Examination in Arts

of the Madras University, and a candidate must possess one or other qualification in order to be eligible for an appointment of Rs. 15 a month and upwards.

In Bombay the alternative examination is conducted by the University, and is called the 'University School Final Examination.' It does not qualify for matriculation, and is indeed intended to be merely a final test for students of high schools who do not intend to enter the University. It is, however, partly based on the matriculation standard of that University, which comprises the following subjects :—

I.—English (no text-books).

II.—Second language (no text-books.)

III—Mathematics, including arithmetic, algebra, and Euclid I—IV with easy deductions.

IV.—General knowledge, including—

(*a*) History of England and of India.

(*b*) Elementary geography, physical, political and mathematical.

(*c*) Elementary mechanics, elementary chemistry, and outlines of the solar system.

The subjects of the alternative examination are the following :—

I.—English, as at matriculation.

II.—Second language, as at matriculation ; with the exception that it is confined to French, German, Latin, or an Indian vernacular, oriental classics and Greek being excluded.

III.—Arithmetic.

Thus, Algebra and Euclid out of heading III, and the whole of heading IV of the matriculation subjects are excluded from the alternative examinations ; and are replaced by either two or three subjects out of the following list :—

(1) English (text-books prescribed).

(2) Second language, defined as above (text-books prescribed).

(3) History of England and India ; physical, political and commercial geography, with special reference to Great Britain, India, and the Colonies.

(4) Algebra to quadratic equations ; Euclid I—IV with deductions.

(5) Elementary chemistry, with either (*a*) statics, dynamics, and hydrostatics, or (*b*) some branch of elementary physics.

(6) Zoology and animal physiology, or botany and vegetable physiology.

(7) Political economy.

(8) Agriculture; including soils, the elements of plants, manure, tillage, live stock, food of cattle, drainage of land, irrigation, grafting, and elementary botany.

(9) Drawing.

The object of the scheme is to organise a 'modern side' in high schools; and the Government (at whose instance indeed it was that the University took action) have lent their support to the scheme by recognising the examination as a qualifying test for the public service.

4. In referring the question in this more fully developed stage to the Government of Bengal, the Government of India remarked:—'What is really wanted is an examination somewhat on the lines of the Oxford and Cambridge middle class examinations, which, though conducted by examiners appointed by the University and under University Statutes, lead to no further advancement in the University curriculum.' And the Lieutenant-Governor was requested to take, in communication with the Senate of the Calcutta University, such action in the matter as might be deemed advisable and possible. In referring the papers to me for report, the Government of Bengal remarked that—

'The matriculation course is designed only to test fitness for entering on the studies pursued in the University; and when used for the purpose of securing a definite educational status for those who have completed their period of schooling, it is applied to a purpose for which it was not intended, and to which it is imperfectly adapted ..... It is, however, very doubtful whether an appreciable effect would be produced merely by establishing the [proposed alternative] examination without offering any special inducement to candidates .....Being generally recognized in Bengal among every class and for many purposes, it [the matriculation examination] confers an educational, perhaps even a social, position which would not attach to passing a novel standard.'

The conclusion was that the only practical way of overcoming the difficulty was to make the new standards

avenues to the public service; and it was suggested for consideration whether they should not be accepted for this purpose as equivalent to the First Arts test. If a scheme corresponding to that of Madras was adopted, the probable effect on University education would need careful consideration.

5. Upon that reference I submitted a report to the Government of Bengal, the character and purpose of which will be seen from the extracts given just below. The Lieutenant-Governor fully approved my proposals, and desired me to address you on the subject. It will be seen that, for the reasons which I advanced, I considered the proposal to establish a final school examination, not leading to further University studies, as being unlikely to be attended with useful results, though I considered that such an examination fell clearly within the legitimate province of the University, even if it was not provided for in the existing Act of Incorporation. What I proposed, as an alternative to such a separate examination, was that the University should take more account than it has hitherto done of the various requirements of those students who, after passing the Entrance Examination, pursue their University studies in some Faculty other than that of Arts, or betake themselves to a professional career outside the University; and that it should do this by introducing a number of alternative subjects into the Entrance course. The following extracts from my report will show the course and character of my arguments :—

The present Entrance course is certainly an improvement upon that which was in force when the Education Commission recommended the institution of an alternative examination 'of a more practical character, intended to fit youths for commercial or non-literary pursuits.' If, then, it is still considered to be insufficiently practical for such purposes, it becomes necessary to ascertain positively what shape an alternative examination should take. This is of course the chief difficulty. As the Government of Bombay observed in 1884 :—'It is perhaps easier to entertain a vague conception of a 'practical course' than to draw out the programme of one suited to India' which shall not lower the educational standard of high schools. The difficulty increases when it is considered how many different purposes the alternative examination is to serve. It is designed to be a preparation or test of fitness for

commercial pursuits, for an industrial or technical career, for medicine or engineering, for clerkships in Government offices, and possibly also for the study or practice of agriculture. The qualifications useful for one of these occupations will be of no special value for another ; whence it seems to follow that the proposed practical examination must include a number of alternative courses.

To take a concrete case, I selected for analysis the subjects prescribed for the alternative examination by the Bombay University (see paragraph 3 above) :—

Let us inquire, therefore, how far this large group of alternative subjects would suit the requirements of Bengal. Nos. (1) and (2) may be removed, since text-books are already prescribed by the Calcutta University in English and the second language, unseen passages being also set for translation or explanation. Nos. (3) and (4) are not, strictly speaking, additional subjects, since they already form part of the Entrance course, with the exception that in No. (4) algebra is carried on from simple to quadratic equations, and in No. (3) geography is to be studied with special reference to England and its possessions.

Thus the first four options of the Bombay examination seem to present no marked improvement over the ordinary subjects of the matriculation examination at Calcutta. I pass on to the remaining subjects, which find no place in the Entrance course. No. 5 (chemistry and physics) seems to have been introduced as a'preparation for manufactures and engineering, No. 6 (zoology and botany) for medical studies, No. 7 (political economy) for commerce, No. 8 for agriculture, and No. 9 (drawing) for the industrial and ornamental arts. These subjects all come under the category of the 'practical,' that is, the non-literary. At the same time they are all perfectly suitable subjects for school education, regarded as a process of intellectual discipline and of the development of the mental faculties. It seems necessary to urge the point that a course of studies designed for pupils in high schools who have no desire to enter the University should, however practical its character, still subserve the purposes of a sound general education. The school should prepare the way for future practical careers by imparting instruction in subjects cognate to them ; but it need not attempt to anticipate the technical training of the factory, the office, or the farm. It may teach arithmetic and commercial geography,

but not business correspondence or the forms of invoices; drawing, but not lithography or pottery; elementary chemistry, but not its application to particular industries; it may teach the principles of scientific agriculture, but need not concern itself with a model farm. In the same way, précis-writing and such like matters, which are best learnt by seeing how they are done in an office, should not, in my opinion, form part of school education, while abundant attention should be paid to the writing of simple idiomatic English. I may refer to the warning uttered on this subject by Mr. Justice West, then Vice-Chancellor of the University of Bombay:—

'He (the non-University student) should be put to work on matters that he can master unless quite exceptionally dull, such as arithmetic, rudimentary economics, mercantile geography, the use of manures ..... The extension of this knowledge should be along those lines where it will be grasped and incorporated by the interests and teachings of active life. Still, it should be education, aiming at making the mind robust and flexible, rather than at shabbily decking it with some rags of 'business information' or low technic skill.'

At any rate, unless the courses to be instituted are such as conform to the idea of a liberal education and contribute to mental discipline, I do not think it likely that the University would consent to undertake examinations in them.

The Government of Madras appears to have been fully aware of the objections raised to the elaborate scheme of examinations propounded in that Presidency, as paying too little attention to general educational requirements. 'The first and most important of these objections,' it remarks, 'is that, while the new examination professes to be the final test of secondary education, it is in fact devised solely or mainly with reference to the requirements of the public service subordinating education to the needs of the service, and including various subjects which should be provided for as hitherto by special tests.' Accordingly, while maintaining the necessity of giving 'greater breadth, variety and completeness' to secondary education, the Government declared its opinion that 'the prospect of qualifying, and the desire to qualify, for the public service, already exercises an injurious effect on education. Nothing should be done which can intensify that effect.'

It was accordingly decided to exclude from the scheme, as originally framed, certain subjects which were thought to bear too close a relation to the requirements of official work. As they are now defined, the four compulsory subjects of the Upper Secondary Examination in Madras (English, a second language, mathematics, history and geography) seem to me to satisfy fairly well the requirements of a liberal education. Certain details apart, to which exception may be taken as encouraging the acquisition of nothing beyond 'low technic skill,' there seems to be little in this part of the Madras scheme of examination which a liberal University need decline to recognise. The optional branches, it is true, go into very much greater detail; and with regard to some of them it might be objected that. while they form no part of general education, an examination held in them under this scheme can supply no sufficient test of technical education.

What has preceded is of course merely preliminary to the main question, whether the University should now be moved to undertake an examination of the kind proposed. Such an examination seems to me to fall quite within the province of a University, even though the preamble of the Act of Incorporation of the Calcutta University seems to limit its operations to that branch of education which leads to University degrees. I think it by no means unlikely that the Senate, having in view the very useful work which Oxford and Cambridge have done for the improvement of non-University education, might, if sufficient grounds were shown, be disposed to take the larger view of its functions here indicated; and if so, there would be no difficulty in amending the Act if this was found necessary.

Before, however, the University pledged itself to any action of this kind, it would, I think, ask for some evidence of reasonable probability that candidates would offer themselves in sufficient numbers for examination in the new courses which it is proposed to institute. An examination costs money, and its expenses can only be recouped by the fees of those examined. It is doubtful, therefore, whether the University would consent to incur any heavy charges if only a few candidates were to be benefited. Hence the first question seems to be, what grounds have we for believing that the establishment of alternative courses would bring forward candidates desirous of being examined in them? What I wish to point out is that

we shall probably not find, and need not look for, any great love of variety in education for its own sake. If variety pays, it will be followed ; but if there is no inducement of that kind, I consider it far more likely that, however many options we offer them, people will neglect the offer and continue to shape their schools after the fashion that they know. It is not enough to provide alternative courses ; motives for taking them up must also be supplied.

To take a concrete example. There are no schools of agriculture now in Bengal, nor do I see any definite prospect of their early establishment, or any (as yet) clearly ascertained use of them if established, though on that question the report of the Committee that has recently investigated the conditions of agricultural improvement in India may be expected to throw some light. But the University would not be likely to institute an examination in agriculture, unless schools or classes were either established or expected, with a prospect of pupils in sufficient number. Political economy, again, which has considerable merits as a subject of general education, seems to have no particular value, from the practical point of view, to a lad about to enter a merchant's office. The work that he does for many years in an office is of a very different character from that on which the doctrines of political economy throw light ; and the most expert young economist might be easily distanced at the outset by one who possessed the humbler qualifications of a neat hand, good English style, facility at accounts and ready business habits. It seems, therefore, to be doubtful whether classes in political economy would be established for the benefit of pupils intended for a commercial career.

With chemistry and physics the case is somewhat different. These subjects are taught, and very thoroughly taught, in the Presidency and other colleges, in which competent professors and efficient laboratories are maintained ; and there is probably little, if any, independent demand for the study of elementary chemistry or physics at a previous stage, where the cost of a laboratory would often be found prohibitive. On the other hand, these subjects form part of the course of instruction in the Civil Engineering College at Seebpore ; and their utility to students intending to enter that institution might lead to the establishment of special schools for teaching them.

Similar considerations apply to the subjects of zoology and botany. There would probably be little independent demand for them, merely as offering variety in education; but chemistry and physiology, and in a lower degree botany, would be useful to intending students of medicine, and a demand might in this way be created.

It appears, therefore, that for some of the alternative subjects suggested there is likely to be an effective demand, if the way is made clear for them. But the way is not always clear. Thus, the University requires that candidates for degrees in engineering shall have passed the Entrance Examination before beginning their special studies. Hence there would be no object in establishing classes in chemistry, mechanics, physics, or advanced geometry, however useful for engineering students, unless the University consented to recognise these subjects as part of the Entrance Examination—alternative, say, with a second language or with history–for candidates proceeding to an engineering degree. Again, it has recently been proposed to make the Entrance Examination the qualifying test for admission to classes intended for the instruction of a new grade of medical subordinates, to be styled 'Sub-Assistant Surgeons.' If that proposal is carried out, physiology and chemistry would have a special value for students intending to enter the class, but only on condition that the University accepted them as alternative subjects for matriculation.

If then this is the final result: that for those subjects, such as political economy and agriculture, which have their uses outside University studies, there would, in the present circumstances of the country, be no demand; while for such subjects as chemistry, physics, physiology, botany, mechanics, and more advanced mathematics, the existence of the demand will depend on the University recognising them as alternative subjects for the Entrance Examination in the case of candidates intended for medicine or engineering: if that be so, it would seem that the application to the University, if made, should take a form different from that suggested by the Government of India. In other words, the proposal that I now beg to submit is that the University should be moved to revise the Entrance standard by introducing into it a number of options, with the view of facilitating the studies of candidates designed for professional careers. The form of the Resolution passed by the Senate on the 18th December, 1886, supplies the

Government with sufficient grounds for asking the University to reopen the question. It ran thus :—'that an alternative examination be not introduced *at present;*' and I well remember that the view generally taken in the discussion was that it was undesirable to close the door to an alternative examination should it be found desirable to institute one hereafter.

The proposals that I have submitted involve, it will be seen, the abandonment of the scheme in the precise form suggested by the Government of India. For reasons stated in the preceding paragraphs, it appears to me that there would be little or no demand for an examination, co-ordinate with the Entrance test, but leading to no further advance in University studies; while, on the other hand, the addition to that examination of a number of subjects which might be taken up alternatively by those preparing for special careers, would probably be found useful and meet with popular acceptance. If this view be adopted, it becomes unnecessary for me to consider the suggestion made in paragraph 4 of Mr. Nolan's letter, that the proposed examination should be regarded as equivalent to the First Arts test as a qualification for the public service. Mr. Nolan's further suggestion (paragraph 5), that, as in Madras, a separate examination to qualify for that service should be held, not by the University, but by the Government, does not seem to me likely to win favour. I fully concur in the view (paragraph 4) that 'ordinarily all candidates for public employment in its higher forms should give proofs of educational attainments, in the first place by obtaining a certificate in some recognised public examination, and secondly by passing a special test in the subjects required by the line which they select.' But I do not see that, as regards the first test, we need go outside the examinations conducted by the University, which seem to me to supply (and that is all that is required at this stage) sufficient tests of a candidate's general education. It being understood that such subjects as drafting and précis-writing should be included in a subsequent and special test, the Entrance Examination seems to be as good a preliminary test of a candidate's general intelligence and industry at that particular stage as we are likely to obtain. In the general test we do not want to find out whether a candidate has particular qualifications for office work, but merely

whether he possesses ability and application such as to afford a reasonable probability that he will make a good office clerk, or whatever other class of appointment may be for the time in question For higher appointments the First Arts, and for higher again the B. A. or M. A. degree may be demanded as a preliminary qualification ; but I see little advantage in instituting any tests of general fitness other than those supplied by the University. Sanskrit is of no special value for a clerkship or an executive appointment, but neither is chemistry or political economy ; all that can be said of them is that a candidate who gets up his Sanskrit or Chemistry well enough to pass an examination will probably be able to master the special duties required of him in the public service. The special test to be independently applied will exclude those who for one reason or another have no turn for such work.

To return to the Entrance Examination. If the University sees its way to adopt the proposals that I have made for extending the range of subjects in that examination, all the alternative subjects should be declared by the Government to possess equal value as a qualification for the public service. Some of the options may be regarded as more practical, that is, less literary, than others ; but as tests of general education all stand on much the same level. I would not give a pass in Chemistry any greater value than a pass in Sanskrit as a qualification for the public service, nor would I give it less value. The only objection that I think can be raised on this ground to the present Entrance test (and the objection seems to be losing force every year) is that the knowledge of English which secures a pass is not always of a kind to guarantee the power of writing plain grammatical English, and of using idioms in their right meaning and their proper connexion ; and this, together with handwriting, should form a chief subject of the special test. That test might also be employed to serve another important purpose by giving every candidate who passed it a certificate to that effect, specifying the subjects in which he had been examined. Only a few of those who pass would obtain Government appointments, but the certificate might come to be regarded as of value both by those seeking, and by those offering, employment in the many private offices and occupations of the town.

6. I now, therefore, leave the question in the hands of the University, being confident that such consideration will be given to it as its importance deserves. The proposals which are put forward above have a close bearing upon University studies in special subjects, and it is upon that ground chiefly that they have been supported. But it will not escape notice that, altogether outside University studies leading to a degree, the introduction of special options will facilitate and promote the establishment hereafter of special schools or special classes, and will thus tend to bring about that variety in education which is generally regarded as one of the chief needs of the present day.

I have the honour to be,

SIR,

Your most obedient servant,

(Sd.) A. CROFT,

Director of Public Instruction, Bengal."

In opening the meeting the President stated that, as the proposals to be considered emanated from himself, he thought it desirable that he should leave the Chair, and therefore proposed that the Very Rev. Father Lafont be elected Chairman.

Raja Piyarimohan Mukerjee seconded the motion, which was carried unanimously. Sir Alfred Croft moved the following resolution :—

" That it is desirable to widen the course for matriculation by the introduction of alternative subjects designed to facilitate the studies of candidates intended for professional careers."

The Rev. Dr. Macdonald seconded the motion.

Raja Piyarimohan Mukerjee spoke in favour of the motion, which was then put to the vote, and carried unanimously.

Sir Alfred Croft proposed—

" That in order to carry out the objects of the foregoing resolution a Committee be appointed to draw up a scheme of examination on the basis of the letter of the Director of Public Instruction, with instructions to report within a month. "

The Very Rev. Father Neut seconded the motion, which was carried unanimously.

Sir Alfred Croft then proposed—

"That the Committee consist of the following gentlemen :—

The Very Rev. Father Lafont.
Mr. A. Pedler.
Rai Radhikaprasanna Mukerjee, Bahadur.
Mr. J. H. Gilliland.
Mr. Jagadischandra Bose.
Babu Asutosh Mukhopadhyay,
and the Mover."

The Hon'ble Sir Henry Harrison seconded the motion, which was carried unanimously.

(Confirmed),

E. LAFONT, S.J., *Chairman.*

A. M. NASH, *Registrar.*

MINUTES OF THE SENATE

FOR THE YEAR 1891-92.

No. 3.

THE 21ST NOVEMBER, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
CHARLES H. TAWNEY, ESQ., C. I. E.
THE HON'BLE MR. JUSTICE AMEER ALI, C. I. E.
A. M. BOSE, ESQ.
A. PEDLER, ESQ., F. C. S.
F. J. ROWE, ESQ.
BABU SURYYAKUMAR SARBADHIKARI,
A. M. NASH, ESQ.
REV. K. S. MACDONALD, D. D.
BABU RADHIKAPRASAD MUKERJEE, C. E., A. M. I. C. E.
RAI LALMADHAB MUKERJEE, BAHADUR.
E. A. BIRCH, ESQ, M. D.
THE HON'BLE SIR HENRY HARRISON, Kt., C. S.
BABU GAURISANKAR DE.
RAJA PIYARIMOHAN MUKERJEE, C. S. I.
BABU DEBENDRANATH RAY.
H. M. PERCIVAL, ESQ.
BABU ISANCHANDRA BASU.
BABU NILMANI MUKERJEE.
C. J. H. WARDEN, ESQ., M. D.
RAI TARAPRASANNA RAY, BAHADUR, F C. S.
BABU CHANDRANATH BASU.
BABU HARAPRASAD SASTRI
SHAMS-UL-ULMA MAULAVI AHMAD.
BABU UMESCHANDRA DATTA.
BABU RAJANINATH RAY.
BABU PRATAPCHANDRA MAJUMDAR.
C LITTLE, ESQ.
BABU SRINATH DAS.
BABU ASUTOSH MUKHOPADHYAY, F R. A. S., F. R. S. E.
BABU GANESCHANDRA CHANDRA.
BABU BIPINBIHARI GUPTA.
BABU JOGINDRACHANDRA GHOSH.
BABU MAHENDRANATH RAY.

196. The Vice-Chancellor having opened the meeting, Babu Asutosh Mukhopadhyay proposed that in para. 7 B. of the B. A. Regulations for the words—

"iii. *Physics and the Elements of Chemistry as defined below.*

"iv. *Chemistry and the Elements of Physics as defined below.*"

be substituted the words—

"iii. Physics and Chemistry as defined below."

The Pass Course in Physics shall include—

(a) General Ideas—

1.—Wave motion :—

Measurement of simple or harmonic wave motions.
Combination of wave motions.
Resolution of complex wave motions into simple or harmonic wave motions.

2.—Potential :—

Definition of potential.
Calculation of potential in simple cases.
Determination of force from potential.
Fundamental propositions respecting lines of force, equipotential surfaces, and tubes of force.

3.—Elasticity :—

Definition of elasticity.
Measurement of elasticity in the cases of solids, liquids and gases.

Distinction between, and determination of, elasticity of constant temperature and of constant entropy for gases.

(b) Heat—

A more thorough acquaintance with the subject than that required for the First Arts Examination and a greater power of working problems on heat.

(c) Light—

In this subject more difficult questions in the determination of foci, focal lengths, &c., will be required than for the First Arts Examination.

(d) Frictional Electricity—

This subject must now be taken up in connection with potential.

(e) Sound—

The laws of the production and propagation of sound determined experimentally.
Intensity, pitch, and quality of sounds.
The velocity of sound in air and other media : Doppler's principle.
Reflection and refraction of sound.
Measurement of sound vibrations and wave lengths of air.
Resonance.
Interference of sound waves. Beats.
Harmonic tones ; their generation and function in sound.
Longitudinal vibration of rods and of columns of air.
Transverse vibration of strings.
Formation of Chladni's figures.
Vibrations of tuning-forks and bells.
Nature of musical sounds.
Vocal organs of man.

(f) Dynamical Electricity—

Voltaic batteries as sources of electric currents.
Action of currents on magnetic needles. Galvanometers.
Thermo-electric currents.
Definition and measurement of electric force, conductivity, resistance, and current.
Ohm's law, and its simpler applications.
Laws of action of currents on currents, and their simpler applications.
Solenoids. Ampère's theory of magnetism.
Electro-magnets.
Mechanical, chemical, and heating effects of currents. Electrolysis.
Induced currents, their modes of generation and laws of action.
Ruhmkorff's coil.
Electro-magnetic currents.
Electro-magnetic machines; the more important details of the working of telegraphs.
Theories of electricity.

(g) Magnetism—

Properties of permanent and artificial magnets.
Magnetic induction.
Phenomena of terrestrial magnetism.
Determination of declination, dip, and intensity of the magnetic force of the earth.
The compass needle.
Methods of magnetisation.
Determination of magnetic laws of action by the torsion balance.
Magnetic potential.

(2) The Pass Course in Chemistry shall include—

(*a*) The following general considerations :—

Definition of Chemistry; differences between chemical action and the action of the physical forces; simple and compound matter; different modes of chemical action; principles of chemical nomenclature; laws of chemical combination; the atomic theory; determination of molecular and atomic weights; symbolic notation; a fairly complete knowledge of atomicity or quantivalence; artiads, perissads, &c.; variations of atomicity; absolute, latent, and active atomicity; graphic notation; chemical equations; calculation of formulæ; compound radicals; classification of elements; relations between atomic weight and quantivalence; physical and chemical relations of atomic weights; specific or atomic volumes; molecular volumes; chemical affinity; influence of pressure on chemical action; relations of heat to chemical affinity; thermo-chemistry; isomerism and allotropy; solution.

(*b*) A fairly complete knowledge of the modes of occurrence, methods of preparation, properties, uses, and general characters of

the following non-metallic elements, of their allotropic modifications and of their principal and best known compounds :—

Hydrogen, fluorine, chlorine, bromine, iodine.
Oxygen (and ozone).
Boron.
Carbon, silicon.
Nitrogen, phosphorus, arsenic.
Sulphur.

(*c*) *A general knowledge of*—

The distinction between metals and non-metals ; physical properties of metals ; chemical relations of metals ; alloys ; acids, bases, and salts ; the constitution of salts ; theory of normal, acid, and basic salts ; general characters and general methods of preparation of compounds of metals with non-metals ; the principles of crystallography ; isomorphism ; outline of the principles of qualitative analysis.

(*d*) A knowledge of the methods of preparation, properties, and uses of the following metals and principal salts :—

Sodium, potassium, ammonium, silver.
Calcium (glass manufacture, &c.), magnesium, zinc, copper, mercury.
Gold.
Lead, tin, platinum, aluminium (porcelain, pottery, &c.)
Antimony, bismuth.
Chromium, manganese, iron.

(3) The Honour Course in Physics shall include in addition to the subjects of the Pass Course—

(*a*) *Heat*—

An elementary knowledge of the principles of thermodynamics.

(*b*) *Light*—

Spherical aberration.
Dispersion.
The formation of rainbows.

(*c*) *Polarization of Light*—

Undulatory theory of light.
Reflection and refraction of light.
Prismatic analysis of light.
Achromatism.
Explanation of lines in the solar and other spectra.
Interference of light.
Diffraction of light.
Measurements of wave lengths of light.
Colours of thin plates.
Double refraction.
Polarization of light by reflection, refraction, and double refraction.
Interference of polarized light as shewn by double refracting crystals. Polariscopes.
Elliptic and circular polarization.
Rotary polarization.

(4) The Honour Course in Chemistry shall include in addition to a fuller knowledge of the subjects of the Pass Course—

Inorganic Chemistry—

(*a*) Study of the following elements :—

Selenium, tellurium, lithium, cæsium, rubidium, barium, strontium, the earth metals, cadmium, indium, gallium, titanium, vanadium, uranium, tungsten, molybdinum, nickel, cobalt, and the platinum metals.

(*b*) A knowledge of the methods used in the preparation of the more important acids, salts, &c., employed in the arts and manufactures.

(*c*) A knowledge of metallurgical operations, such as are employed in the preparation of iron, zinc, copper, lead, tin, mercury, silver and aluminium.

Organic Chemistry—

(*a*) The following general considerations :—

Definition of organic bodies, synthesis from inorganic materials, decompositions and transformations of organic compounds, analysis of organic bodies.

Determination of the specific gravity of gases and vapours.

Determination of empirical, rational, and constitutional formulæ ; theory of types, classification of organic compounds, organic series, constitutional formulæ of organic compounds.

(*b*) Isomerism, metamerism, and polymerism, physical properties of organic compounds.

A knowledge of some few typical compounds in each of the different classes of organic compounds.

Babu Umeschandra Datta seconded the motion.

Mr. Pedler proposed as an amendment,—

" That in the definition of the Honour Course in Chemistry all the words after ' Organic Chemistry ' be omitted, and the following words put in their place :—

'(*a*) Definition of Organic Chemistry.

' Constituents of organic bodies, synthesis from inorganic materials.

' Sources of compounds, purification of compounds.

' Determination of boiling point, melting point, and other physical properties of organic bodies.

' Preparation of bodies for analysis.

' Analysis of organic bodies, methods of determining empirical, molecular, and structural formulæ.

' Detailed classification of organic bodies, homologous series.

'Isomerism, including its various kinds.

'Theory of organic radicals.

'(*b*) A knowledge of the methods of preparation, properties and re-actions, together with the relations to one another, of a few typical bodies belonging to each of the various classes of organic compounds (excluding those belonging to the so-called aromatic series), derived from Hydrocarbons containing not more than five atoms of Carbon.

'*Practical chemical analysis.*

'A practical knowledge of the qualitative analysis of inorganic substances will be required. At the examination substances will be given for analysis containing not more than two acids and two bases'."

Dr. Warden seconded the amendment.

The Rev. Dr. Macdonald said that the definition of the subjects had been circulated so late that members had not had time to consider it properly, and that no opportunity had been given to them to consider the effect of the amendment.

Mr. A. M. Bose proposed as an amendment—

"That the Senate accept the recommendation of the Syndicate that instead of the two courses III and IV there be one Pass Course consisting of Physics and Chemistry, but that the question of the definition of the Course be left for consideration at an adjourned meeting."

The Rev. Dr. Macdonald seconded the amendment

Nawab Abdool Luteef, Bahadur, proposed a further amendment that the consideration of the whole question be postponed to a later meeting.

Rai Lalmadhab Mukerjee, Bahadur, seconded the amendment.

Nawab Abdool Luteef's amendment being put to the vote, was lost by a large majority.

Mr. A. M. Bose's amendment was then put to the vote, and lost, 10 voting for it, and 11 against it.

Mr. Pedler's amendment was then put to the vote, and carried by a majority of 13 to 8.

Dr. Macdonald asked whether Mr. Pedler's amendment had been considered by the Board of Studies in Chemistry.

Mr. Pedler explained that he had mentioned his proposal at the meeting of the Board, but had been told that it was out of order.

The motion as amended being put to the meeting, Rai Lalmadhab Mukerjee, Bahadur, proposed as an amendment that the question be referred back to the Board of Studies in Chemistry.

The Vice-Chancellor refused to accept the amendment, as it was virtually the same as a previous amendment.

After some discussion on the point of order, Mr. A. M. Bose was allowed to propose as an amendment—

"That the question of the definition of the Honour Course in Chemistry be referred to the Board of Studies in Chemistry for consideration and report."

Dr. Macdonald seconded the amendment.

Dr. Birch and Mr. Pedler opposed the amendment, and Babu Umeschandra Datta supported it.

The amendment was put to the vote and lost by a majority of 13 to 8.

The original motion, with Mr. Pedler's amendment, was then put to the vote and carried unanimously.

Mr. A. M. Bose then proposed that in order to bring the Regulations into accordance with the resolution that had been passed, the following changes be made in para. 7 B of the B. A. Regulations :—

For "III. and IV. The full course in Physics and Chemistry together with the Doctrine of Scientific Method" *read* "III. A fuller course in Physics and Chemistry, as defined below, together with the Doctrine of Scientific Method."

For "V" and "VI" *read* "IV" and "V."

The motion was seconded and carried unanimously.

197. Babu Asutosh Mukhopadhyay proposed—

That Simple Harmonic Motion be added to the list of subjects under the head "Dynamics" for the B. A. examination. (Calendar for 1891, p. 36).

Babu Gaurisankar De seconded the motion, which was carried unanimously.

198. Babu Asutosh Mukhopadhyay proposed—

That in para. 8 (II) of the M. A. Regulations "Hydromechanics, including the Theory of Sound" be substituted for "Hydromechanics, omitting the Theory of Sound."

Babu Mahendranath Ray seconded the motion.

Mr. Little, Dr. Macdonald, Mr. Nash, and Mr. A. M. Bose spoke against the motion, pointing out that the M. A. Course in Mathematics was already sufficiently long and difficult.

The motion was then, with the consent of the meeting, withdrawn.

199. Dr. Birch proposed—

(1) That the following words be added at the end of paras 4, 10, and 18 of the Regulations for a Licence in Medicine and Surgery, and at the end of paras 4, 10, and 15 of the Regulations for the Degree of Bachelor in Medicine :—

"Provided he produces a certificate that he has, since the date of the last examination at which he presented himself, attended a regular course of instruction in the subject or subjects in which he failed at that examination."

(2) That the following foot-notes be added to the same paragraphs to define the meaning of the term "a regular course of instruction" :—

(*a*). To para. 4 of the L. M. S. Regulations and to para. 4 of the M. B. Regulations :—

"A regular course of instruction means attendance at one complete course of lectures, or in the case of Practical Chemistry, of Practical Chemical Exercises, as defined in para. 2."

(*b*). To para 10 of the L. M. S. Regulations, and to para. 10 of the M. B. Regulations :—

"A regular course of instruction means attendance at one complete course of lectures, as defined in para. 8."

(*c*). To para. 18 of the L. M. S. Regulations :—

"A regular course of instruction in Medicine or Surgery means six months' attendance at a recognised hospital. in Midwifery, six months' attendance at an obstetric hospital, and presence at six Labours : in other subjects, attendance at one course of lectures, as defined in para. 16."

(*d*). To para. 15 of the M. B. Regulations :—

"A regular course of instruction in Medicine or Surgery means six months' attendance at a recognised hospital in Midwifery, six months' attendance at an obstetric hospital, and presence at six Labours in other subjects, attendance at one course of lectures, as defined in para. 13."

A candidate who has obtained the Licence in Medicine and Surgery, and who has been attached to a hospital or dispensary for six months since the date of his last appearance at the Second M. B. examination, will be held to have attended a regular course of instruction.

Babu Debendranath Ray seconded the motion.

Rai Lalmadhab Mukerjee, Bahadur, spoke against the motion, and Babu Asutosh Mukhopadhyay supported the motion.

Dr. Birch having replied, the motion was put to the vote and carried by a majority of 20 against 1.

200. Babu Asutosh Mukhopadhyay proposed that Cyril Vethecan be admitted to the F. A. examination without passing the Entrance examination, on the ground of his having passed the Senior Local examination of the Cambridge University, provided he satisfies the other requirements of the University.

Babu Nilmani Mukerjee seconded the motion, which was carried unanimously.

201. Babu Asutosh Mukhopadhyay proposed that Miss R. M. A Marshall be admitted to the F. A. examination of 1893 without passing the Entrance examination, on the ground of her having passed the Senior Local examination of the Cambridge University in 1890.

Mr. A. M. Bose seconded the motion, which was carried unanimously.

202. The Hon'ble Mr. Justice Amir Ali proposed that the meeting be adjourned till Saturday, the 5th December. Carried unanimously.

(Confirmed),

GOOROO DASS BANERJEE, *Vice-Chancellor.* A. M. NASH, *Registrar.*

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 8.

THE 25TH NOVEMBER, 1891.

(*In circulation.*)

203. Read a letter from the Administrateur Principal of Chandernagore, enclosing an application for the affiliation of St. Mary's College, Chandernagore, up to the F. A standard.

RESOLVED—

That an application be made to the Government of India in the Home Department, requesting the Governor-General in Council to affiliate St. Mary's College, Chandernagore, in Arts, up to the F. A. standard, with effect from the 23rd of June, 1890.

A. M. NASH,
Registrar.

(Confirmed),

GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES

OF THE

FACULTY OF ENGINEERING

FOR THE YEAR 1891-92.

No. 1.

THE 1ST DECEMBER, 1891.

Present:

COL. J. M. MCNEILE, R. E., PRESIDENT, *in the Chair.*

THE HON'BLE SIR ALFRED CROFT, K. C. I. E.
J. S. SLATER, ESQ.
BABU RADHIKAPRASAD MUKERJEE, C. E., A. M. I. C. E.
W. BOOTH, ESQ.

204. The Faculty met to re-consider, at the request of the Syndicate, the revised Regulations for the Honour examination in Engineering recommended by the Faculty at their meeting held on the 23rd March, 1891, and a letter from the Director of Public Insruction, Bengal, recommending certain changes in the F. E. and B. E. examinations, proposed by the Government of Bengal.

RESOLVED—

That the meeting be adjourned to 7th December.

A. M. NASH,
Registrar.

(Confirmed),

J. M. MCNEILE, COL., R. E.,
President.

MINUTES OF THE SENATE

FOR THE YEAR 1891-92.

No. 4.

THE 5TH DECEMBER, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C. I. E.
CHARLES H. TAWNEY, ESQ., C. I. E.
THE HON'BLE SIR ALFRED CROFT, K. C. I E.
BABU GAURDAS BASAK.
BABU OMESH CHUNDER DUTT
THE HON'BLE MR. JUSTICE AMEER ALI, C. I. E.
BABU KALICHARAN BANERJEE.
C J. LYALL ESQ., C. S., C. S. I.
A. F. RUDOLF HOERNLE, ESQ., PH. D.
F. J. ROWE, ESQ.
A. M NASH, ESQ.
REV. K. S. MACDONALD, D. D.
RAI LALMADHAB MUKERJEE, BAHADUR.
THE HON'BLE SIR HENRY HARRISON, KT., C. S.
BABU GAURISANKAR DE.
RAJA PIYARIMOHAN MUKERJEE, C. S. I
BABU DEBENDRANATH RAY.
RAI RAJKUMAR SARBADHIKARI, BAHADUR.
H M PERCIVAL, ESQ.
BABU SARADACHARAN MITRA.
A. F. ABDUR RAHMAN, ESQ.
BABU CHANDRANATH BASU.
BABU HARAPRASAD SASTRI.
BABU UMESCHANDRA DATTA.
BABU RAJANINATH RAY.
C. E. BUCKLAND, ESQ., C. S.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S, F. R. S. E.
BABU BIPINBIHARI GUPTA.
BABU JOGINDRACHANDRA GHOSH.

205. Sir Alfred Croft moved that W. H. Bartlett be admitted to the F. A. Examination without passing the Entrance Examination, on the ground of his having passed the Senior Local Examination of the University of Cambridge.

Babu Umeschandra Datta seconded the motion, which was put to the vote, and carried unanimously.

206. Sir Alfred Croft next moved that O. Van Hoff be admitted to the F. A. Examination of 1893 without passing the Entrance Examination, on the ground of his having passed the London Matriculation Examination.

Babu Umeschandra Datta seconded the motion, which was put to the vote, and carried unanimously.

207. The Vice-Chancellor said that the next matter was the consideration of the Report of the Committee appointed to consider the needs of the University, and the best steps to provide for them. The Report had been circulated to the members of the Senate, and the original Report was on the table. He would invite the Hon'ble Justice Ameer Ali to speak to it.

The Hon'ble Justice Ameer Ali said :—

"SIR,—You have been good enough to ask me to bring this matter up for discussion. But for several reasons, to which I shall refer very briefly, I desire to propose that the Report be referred back to the Committee, in order that certain matters which have come to the notice of some of the members of the Committee, after the Report was sent in to the Senate, may be taken into consideration, and that the questions be then discussed upon that basis. I think it right, however, to make one or two remarks to explain the grounds upon which the present Report is founded. The Committee was appointed with the object of considering two questions; first, the needs of the University; and second, to devise the best methods of meeting those needs. How this Committee came to be appointed is known to the members. At a meeting of the Senate, from which I was unavoidably absent, a proposal was brought forward to the effect that the fees of all candidates going up for the examinations of this University should be more or less raised to certain limits. One of the reasons for this proposal was, as I understand, that the University was in need of funds. I was opposed to that proposal in that general form. However, both questions, *viz.*, that relating to the needs of the University, and the desirability of raising the fees, were referred to a Committee. The gentleman who was in charge of the motion before the Senate, placed the necessities of the University before us, and they were taken into consideration at great length. The two needs pointed out at the time, and in regard to which

I don't think there was much dispute, were: first, an examination-hall, where the University examinations might be held, without inconvenience to the educational institutions which had hitherto been good enough to place their buildings at the disposal of the University; and secondly, the appointment of a whole-time Registrar, who might devote his entire time to the University. As regards the question of an examination-hall, which has been put in the Report in the second place, I think it ought to have been put first, and I, therefore, begin with it. We instituted enquiries as to whether any building sufficiently large to accommodate the students was available in Calcutta. We also enquired whether the Town Hall was available for that purpose, and were informed that, with the exception of the lower floor, it was not. The Municipality objected to giving up the upper floor for the use of the University. That made the whole thing impossible, more especially as it was said the ground floor would not hold the entire body of students appearing for the examinations. Then it was suggested that the various institutions which had hitherto thrown open their buildings for the purpose of these examinations, might possibly continue their courtesy. But it was admitted that though those educational institutions were willing to oblige the University with the loan of their buildings as heretofore, yet the fact of the examinations being held in them caused serious inconvenience and led to the stoppage of educational work for several weeks. Well, that was one of the reasons which induced the Committee to come to the conclusion that it would be right and proper to purchase a plot of land near the Senate House where, for a time, a temporary structure might be erected, for holding the examinations till funds were available for erecting an examination-hall worthy of the University. This seemed to the majority of the Committee both reasonable and feasible. There was not much difference of opinion on this question, and the conclusion arrived at was, that a piece of land near the Senate House, which could be had for a very moderate price, should be purchased and utilised as aforesaid. It was not considered desirable to mention either the price or the locality. There seems to be an impression that we intended erecting a building at once, but it will be seen from the Report nothing of

the sort is contemplated. It would only be kept in reserve. If we got any support from the Government, or from the Municipality, it would perhaps be possible, but in any case there would be plenty of time to consider that question. As regards the other matter, the appointment of a whole-time Registrar, there was at that time no difference of opinion, and it was decided almost unanimously, that it was desirable to have a whole-time officer. We then proceeded to discuss how best to provide for the two needs indicated above. A suggestion was made, that there should be some economy introduced in certain items of expenditure. It was suggested that the printing expenses should be reduced. The Registrar was good enough to take that question in hand, and the result was a considerable reduction in the printing expenses.

Another suggestion was that the Examiners' fees should be lowered, but nothing tangible was put forward; the matter was discussed at some length, and a majority of the Committee came to the conclusion that it was almost impossible, having regard to the character of the Examination, to give effect to that suggestion without serious detriment to the University. It was thought inexpedient to reduce the fees paid to the Examiners, because the inevitable result of such a proceeding would be that good Examiners would not accept the work. The third proposal was to raise the examination fees. It was not exactly a new proposal, but under the circumstances it was placed before the Committee as one. It was almost unanimously decided that it would not be right to raise the fees in the case of the Entrance examination, as it would press very heavily on the candidates, considering the class of people from whom they generally came. As regards the candidates for the First Arts and the degree Examinations, it appeared to the members right and proper that the fees should be raised. In the case of the B. L. Examinations it seems to me that the fee is very low, and I think it right the candidates should be required to pay a little more. As regards the B. A. degree the matter stands on exactly the same footing.

It is only reasonable that these men, who come to us to have the hall-mark of high education impressed upon them, should pay something substantial to obtain their

diplomas. The reason, however, for which I ask that the Report be referred back to the Committee is this:—The Registrar has brought to my notice that the subject in which the Committee was unanimous—namely, the appointment of a whole-time Registrar, requires further consideration. He thinks now, and I am inclined to agree with him, that such an appointment will not be of advantage to the University. This being so, the matter requires being reconsidered. I beg therefore to propose that it be referred back to the Committee.

Rai Rajkumar Sarbadhikari, Bahadur, seconded the motion.

Sir Alfred Croft suggested an enlargement of the terms of the motion, so as to include an inquiry into the financial results of the proposed changes. The Report, as now submitted, contained no information whatever on that important subject.

The Hon'ble Justice Ameer Ali pointed out that the Committee had been simply told to enquire into the needs of the University, and how to meet them.

Sir Henry Harrison said it was very desirable that the form of the Resolution should in no way be restricted at the stage.

Raja Piyarimohan Mukerjee said, that as there were three dissentients from the Report, it was very desirable to increase the numbers of the Committee, and at least two more names be added, so that there should be at least a majority of the Committee to support its recommendations. He proposed the addition of Sir Henry Harrison and Nawab Abdool Luteef.

The Hon'ble Ameer Ali thought it would be better to have the matter brought before the Committee in the larger shape proposed by Sir Alfred Croft. The Resolution he had to move was as follows:—

"That the Report be referred back to the Committee for further consideration of the questions referred to them, and that the Committee be specially requested to include in their Report a fuller statement of the financial position of the University with reference to the proposals made in the Report, including that for a new building,

and any other proposals that they may have to make relative to the income and expenditure of the University."

Babu Rajaninath Ray said that, as he had proposed the appointment of the Committee, and took a prominent part in the matter, he wished to say a few words. First of all he begged to point out what appeared to be a slight inaccuracy in the statement made by the learned mover of the Resolution. It was not the fact that the question of remuneration of Examiners had been fully gone into. The draft Report of the Committee had been drawn up before that question was discussed at all. When he pointed out that the Report did not accurately represent the results of the deliberations of the Committee, and wanted to know whether it had been adopted at a meeting of the Committee, a fresh meeting was called to re-consider the Report. It was at this last meeting that he urged that the question of possible savings in the heavy item of remuneration of Examiners should be considered. But the majority of the Committee considered it too large a question, and refused to discuss it. The Report, as presented, was the result of modifications introduced at the last meeting. In the draft Report the need of a building stood as the most pressing. As a matter of fact, the Committee regarded the whole-time Registrar as more urgently needed, and the revised Report put the relative urgency of the two needs more accurately.

Proceeding to the consideration of the two principal needs, there was little or no difference of opinion as to the necessity of a whole-time Registrar. No such unanimity existed, however, as to the necessity for a building large enough to seat all the candidates for examination. The speaker submitted that no case had been made out for such a building. From its very foundation the Calcutta University had used for examination purposes the different educational buildings. There was no reason why the same practice should not be continued. No proof whatever had been adduced before the Committee that the educational institutions had now refused to lend their buildings, and it seemed to the speaker that an unmerited slur was being put on the public spirit of the institutions which had so readily lent their halls so long. The necessity for a new building had not therefore been established, though if funds were plentiful the speaker would willingly vote for the purchase of the neighbouring

land. He objected to the matter being referred back to the Committee, as he thought that it would lead to no good results, and probably the members would be more hopelessly divided among themselves than they were already. While no new facts had been brought to light, it would be tantamount to saying that the Committee had slurred over their work. The slightly extended scope given to the enquiry would not remove misunderstandings. Even the original Resolution contemplated an enquiry into the expenditure of the University, as was evident from the learned Vice-Chancellor's wish, expressed at the time, that the cost of re-examinations should not be touched. Yet some members of the Committee maintained that the terms of the reference to them did not authorise them to scrutinize the expenditure of the University. If therefore the matter be referred back to the Committee, this point should be placed beyond all doubt.

That the expenditure of the University, especially the remuneration of Examiners, required looking into, would be evident to the learned members of the Senate, from the fact that the remuneration has not risen and fallen proportionately with the number of candidates. While with a smaller number of candidates there was a large annual surplus before, the surplus had with larger numbers grown small by degrees and beautifully less, till it had altogether disappeared, and landed the University in actual bankruptcy last year. They had been steadily going downhill and it behoved them, as men who cared for their reputation as men of business, to enquire into the cause of this result. The speaker took it, that it was not beyond their ingenuity to devise a more scientific scale of remuneration. It was also their duty to see how the money they voted by additional taxation was applied. Unless economy was practised there was no guarantee that even if they raised another Rs. 30,000 by additional fees, it would not disappear like the surplus they had had before.

Mr. Nash said that, with reference to the statements made regarding income and expenditure, he thought it advisable to explain how the deficit of Rs. 58,000 in 1890-91 had arisen. Members would remember that in 1890 the results of the University examinations were not published until May, the consequence being that the

Examiners were not paid till June. This year the lists were published in March, and as the Examiners were always paid directly after the examinations, a number of them received their cheques in that month, so that the accounts for 1890-91 included, under that head of expenditure, the whole cost of the examinations held in 1890-91, and also about Rs. 39,000 which formed part of the cost of the Entrance, F. A. and B A. examinations of 1891 ; that cost therefore must be deducted from the deficit, leaving a deficit of Rs. 19,000. There was another matter which ought to be referred to. Members were aware that the University published a certain number of Text-books for the Entrance, and these books were sold for the University by Messrs. Thacker, Spink and Co. The receipts were usually paid in by that firm in March, but for some reason or other, they did not pay them this year until April. The consequence was, that the total amount of receipts under that head disappeared from the Balance Sheet for 1891. The total deficit instead of being Rs. 58,000, practically came to about Rs. 10,000 only. The causes of that deficit were these. The Entrance Examination of 1891 brought up about 200 candidates less than the examination of the previous year ; this, however, did not make any very great difference, because the cost of examining each candidate was rather more than Rs. 10. In 1890 there were nearly 2,900 candidates for the F. A. Examination, while in 1891 there were less than 2,100, so that there was a decrease of over Rs 16,000 in fees. This represented a considerable loss to the University since the cost of examining a candidate was less than Rs. 20. The same thing happened in the B. A. There was a reduction of about 250 to 300 in the number of candidates, each candidate paying a fee of Rs. 30 for examination ; so that the total reduction in fees was a little over Rs. 8,000. There was a reduction of the amount of fees last year of about Rs. 25,000 without a proportionate reduction in the expenses of examination. This accounted to a great extent for the deficit in 1890-91.

The system of re-examination adopted in 1890, had materially increased the expenditure on the examinations. This system was adopted to secure more accurate results. Some very serious inaccuracies were pointed out in the Entrance work, and the Syndicate thought it was necessary to prevent their recurrence.

The motion proposed by the Hon'ble Justice Ameer Ali was then put to the vote, and carried, there being only one dissentient vote.

Raja Piyarimohan Mukerjee proposed that the following names be added to the Committee :—

Babu Gaurisankar De, Mr. Abdur Rahman, Nawab Abdool Luteef, Bahadur, and Mr. O. C. Dutt.

Babu Jogindrachandra Ghosh seconded the motion, which was put to the vote, and lost.

The meeting then adjourned.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES

OF THE

FACULTY OF ENGINEERING

FOR THE YEAR 1891-92.

No. 2.

THE 7TH DECEMBER, 1891.

(Adjourned Meeting).

Present :

COL. J. M. MCNEILE, R. E., *President, in the Chair.*

THE HON'BLE SIR ALFRED CROFT, K. C. I. E.
J. S. SLATER, ESQ.
BABU RADHIKAPRASAD MUKERJEE, C. E., A. M. I. C. E.
RAI KSHETRANATH CHATTERJEE, BAHADUR, M. I. C. E.
W. BOOTH, ESQ.

208. The Faculty resolved to recommend to the Syndicate that the following revised rules for Honours in Engineering be adopted :—

(1). An examination for Honours in Engineering shall be held annually in Calcutta, commencing at such time as the Syndicate shall determine, the date to be notified approximately in the Calendar for the year.

(2). Any candidate who has passed in that or any previous year, the examination for the degree of "Bachelor in Engineering" or for a "Licence in Engineering" shall be eligible for admission to the examination for Honours.

(3). Every candidate shall send in his application to the Registrar at least three months before the date fixed for the commencement of the examination.

(4). A fee of rupees one hundred shall be payable by each candidate, and no candidate shall be admitted until he has paid this fee to the Registrar. A candidate who

fails to pass or to present himself for examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent examinations on payment of a like fee of rupees one hundred on each occasion.

(5). The examination shall be written and oral in the following subjects :—

I.—MATHEMATICS.

(1) Statics. The composition and resolution of forces acting in one plane on a particle or rigid body. Moments. Bending moments. Conditions of equilibrium of a particle or rigid body acted on by forces in one plane. Force diagram of a system of forces in equilibrium. Meaning of virtual work and work done by a force Applications of the above to the solution of problems (the candidate to be allowed the option of adopting the graphic method of solution). Equilibrium of constrained bodies and the simple machines. Determination of centroids. Friction. The funicular polygon. The catenary Application to roofs and bridges.

(2) Dynamics. *Kinematics*. Velocity and acceleration, uniform and variable. Angular velocity. Numerical value of velocity or acceleration dependent on units of time and length. Relative velocities and accelerations. Composition and resolution of velocities and accelerations. Formulæ connecting time and distance described. Velocity and acceleration.

Kinetics. Newton's laws of motion, especially the scholium to the third law, with applications and illustrations of the same in the working of examples. The doctrine of the dimensions of physical quantities. Relation between force, mass moved, and acceleration produced. Attwood's machine. Motion of projectiles in vacuo. Direct impact of bodies. Coefficient of restitution. Constrained motion of bodies sliding down smooth curves. The doctrine of the simple harmonic motion, with application to the pendulum. Uniform motion in a circle. Conical pendulum. The principles of work and energy. Conservation of energy. The motion of a rigid body in two dimensions, in particular round a fixed horizontal axis under the action of gravity. The compound pendulum. The ballistic pendulum. Moments of inertia.

(3) Geometrical Optics. The reflexion and refraction of light. Mirrors, prisms, lenses. The formation of images. The microscope, the telescope, and Hadley's sextant. The spectrum, the spectroscope.

(4) Spherical Trigonometry. Euclid, Book XI, propositions 1—21. Elementary formulæ for the trigonometrical functions of the parts of a triangle. Napier's analogies. Gauss's theorems. The solution of triangles.

II.—ENGINEERING.

(1) Applied Mechanics.

(2) Hydraulics.

(3) Theory and practice of building. Properties of building materials. Road, railway, canal, and river engineering.

III.—ELECTRICAL ENGINEERING, &c.

The theory of the potential. The measurement of difference of potential, both electrostatically and electrokinetically. The long and short coil galvanometers. Voltmeters. Measurement of current intensity. Ammeters. Definition and measurement of resistance. Ohm's discovery. Verification of the same. Kirchhoff's laws. Wheatstone's bridge. The voltameter. Poggendorff's and Latimer Clarke's methods of comparing differences of potential. Ohmmeters. Determination of the Ohm. Peltier and Thomson effects, and the graphic representation of the same. The series, shunt and compound dynamos. Storage cells. Cardew's voltmeter. The alternating dynamo. The electro-dynamometer. The transformer. Electric lighting. Arc and incandescent lamps. Efficiency of a dynamo and of a motor. Determination of horizontal component of earth magnetism. Determination of magnetic moment. The ballistic galvanometer. Comparison of capacities. The laws of electro-magnetism and of magneto-electric induction. Self and mutual induction. Practical methods of measuring coefficients of induction. Systems of electric and magnetic units. Electric and magnetic measurements generally, with the dynamic principles on which they are based

Thermodynamics. The first law. Indicator diagrams. Isothermal and adiabatic transformations. The ideal

reversible engine. Carnot's cycle and its consequences. Absolute temperature. The second law. The doctrine of entropy. Application of the above to the steam engine.

IV.—GEODESY.

General principles of surveying, with the theory and use of instruments used in surveying. Measurement of base lines with corrections for level and temperature. Reduction of angles to the plane of the horizon. Reduction to the centre. Spherical excess. Method of distributing errors. Calculation of sides of triangles by the method of chords, by Legendre's theorem, or by spherical trigonometry. Determination of latitudes, longitudes, and azimuths. Heights of stations and terrestrial refraction. Measurement of arcs of latitude and longitude. Determination of the figure of the earth by geodetic measurement and by the pendulum.

(6). The examination shall be both written and oral; the written examination shall be conducted by means of printed papers in each of the following subjects :—

1. Statics and Optics.
2 Dynamics and Spherical Trigonometry.
3. Geodesy.
4. Do.
5. Applied Mechanics.
6. Do. do.
7. Hydraulics.
8. Do.
9. Practice of Building.
10 Do. do.
11. Electrical Engineering.
12. Thermodynamics.

(7). The oral examination shall be held in Geodesy and Electrical Engineering, including practical work in those subjects, and may be held in other subjects at the discretion of the Examiners.

(8). As soon as possible after the examination, the examiners shall meet and draw up, and submit to the Syndicate, a report giving the names of the candidates whom they consider entitled to "Honours in Engineering," arranged in order of merit, and the Syndicate shall publish the list in their next Minutes.

(Rules for examination to be inserted in the Calendar after Rules for "Licence in Engineering" and "Bachelor in Engineering.")

(1). The examinations shall be held in the following order :—

First day	10 A M. to 2 P. M.	...	Statics and Optics.
2nd „	10 A. M. to 2 P. M.	...	Dynamics and Spherical Trigonometry.
3rd „	10 A M to 1 P. M.	...	Geodesy.
	2 P M to 5 P. M.	...	Ditto.
4th „	10 A. M. to 2 P M.	...	Applied Mechanics.
5th „	10 A. M to 2 P. M.	...	Ditto.
6th „	10 A. M. to 1 P. M.	..	Hydraulics.
	2 P. M. to 5 P M.	...	Ditto.
7th „	10 A. M. to 1 P. M.	...	Practice of Building.
	2 P. M. to 5 P. M.	...	Ditto.
8th „	10 A M to 2 P. M.	...	Electrical Engineering.
9th „	10 A M. to 2 P M.	...	Thermodynamics.
10th „	Oral and Practical Examination in Geodesy.		
11th „	Oral and Practical Examination in Electrical Engineering.		

Scale of Remuneration to Examiners.

		Rs.	A.	P.
Setting a paper ...	...	100	0	0
Examining a paper ...	...	5	0	0
Oral examination for each candidate	...	5	0	0

209. With reference to the proposals of the Government of Bengal—

(1) To abolish the First Examination in Engineering.

(2) To reduce the Course for the L. E. and B. E. examinations, from four years to three, it was

RESOLVED—

That in consideration of the fact that the adoption of the proposals would necessitate the postponement till the fourth year of all practical work in the only institution that sends up candidates to the Engineering examinations, and that therefore the University degrees and licences in Engineering would be conferred on persons who had received no practical training whatever, the Faculty were unable to recommend the adoption of the proposals.

A. M. NASH,
Registrar.

(Confirmed),
J. M. McNEILE, COL., R. E.,
President.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 9.

THE 12TH DECEMBER, 1891.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,

Vice-Chancellor, in the Chair.

CHARLES H. TAWNEY, ESQ., C. I. E.
THE HON'BLE SIR ALFRED CROFT, K. C. I. E.
BABU MOHINIMOHAN RAY.
E. A. BIRCH, ESQ., M. D.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.
BABU ASUTOSH MUKHOPADHYAY, F. R. A. S., F. R. S. E.

...

210. The Minutes of the meetings of the Syndicate held on the 14th and 25th November were read and confirmed.

211. Read the Minutes of the Faculty of Arts, dated the 18th November.

ORDERED—

To be recorded.

212. Read the proceedings of the Board of Studies in Chemistry, dated the 28th November.

Read also the proceedings of the Board of Studies in Mathematical and Experimental Physics, dated the 28th November.

RESOLVED—

That the following books be prescribed as text-books in Physics and Chemistry for the B. A. Examination of 1894 :—

PHYSICS AND CHEMISTRY.

PASS COURSE.

Deschanel ... ... Elementary Treatise on Natural Philosophy.

Kolbe	Inorganic Chemistry, translated by Humpidge.

PHYSICS, CHEMISTRY AND THE DOCTRINE OF SCIENTIFIC METHOD.

HONOUR COURSE.

Deschanel	Elementary Treatise on Natural Philosophy.
S. P. Thompson	Elementary Lessons in Electricity and Magnetism.
Tait	Heat (Omitting Chaps. 21 and 22).
Frankland and Japp ...	Inorganic Chemistry (Edition 1884), omitting all the sections printed in small type, and all the parts relating to the following elements:—Zirconium, Thorium, Niobium, Tantalum, Beryllium, Palladium, Iridium, Rhodium, Osmium, Ruthenium, Norwegium, Cerium, Didymium, Lanthanum, Yttrium, Erbium, Terbium, Scandium, Samarium, and Decipium.
Remsen	Organic Chemistry.
Jones	Junior Course in Practical Chemistry.
Jevons	Principles of Science, 2nd Edition (omitting Books I and II.)

213. Read the following report of the Examiners for the Premchand Roychand Studentship Examination :—

"We the undersigned Examiners for the Premchand Roychand Studentship have the honour to recommend that the first Studentship be awarded to Mr. E. M. Wheeler, and that the second Studentship be divided between Babus Janakinath Bhattacharyya and Hirendranath Datta.

(Sd.) A. F. RUDOLF HOERNLE.
" MICHAEL PROTHERO.
" KRISHNAKAMAL BHATTACHARYYA.
" CHARLES H. TAWNEY."

RESOLVED—

That as no Studentship was awarded for Literary subjects in 1887 and 1889, the three available Studentships be awarded to—

1 E. M. Wheeler.
2 { Janakinath Bhattacharyya.
{ Hirendranath Datta.

On the result of the Premchand Roychand Studentship Examination, the Mouat Medal for 1891 was awarded to E. M. Wheeler.

214. Read the following report of the Examiners for the Honours in Law Examination :—

"To

THE REGISTRAR, CALCUTTA UNIVERSITY.

DEAR SIR,

We are of opinion that none of the three candidates for the degree of Honours in Law has answered the questions set sufficiently well to entitle him to that degree.

We have the honour to be,
Sir,
Your obedient Servants,
(Sd.) A. P. HANDLEY.
SRINATH DASS."

November 20th, 1891.

ORDERED—

To be recorded.

215. Read the following report of the Board of Examiners for the B. L. Examination :—

"FROM

THE BOARD OF EXAMINERS FOR THE B. L. EXAMINATION.

TO

THE REGISTRAR, CALCUTTA UNIVERSITY.

Dated the 28th November, 1891.

SIR,

We have the honour to submit, for the approval of the Vice Chancellor and Syndicate, the result of the B L Examination.

The number of candidates registered for the examination was 184, of whom 50 were successful, 12 were absent and 122 failed. Of the successful candidates 5 were placed in the first division, and 45 in the second.

We are of opinion that Wasudeo Ramchandra Dhobley, who stands first in the first division, fully deserves a gold medal, and we accordingly recommend that the same may be awarded to him.

We have the honour to be,
Sir,
Your most obedient Servants,
(Sd) AMEER ALI, *President.*
,, J. G. APCAR.
,, AMARENDRANATH CHATTERJEE.
,, SERAJUL ISLAM"

The Registrar reported that, in anticipation of the sanction of the Syndicate, he had published the list of successful candidates in the *Gazette.*

RESOLVED—

That the report be adopted, and the action of the Registrar approved.

RESOLVED ALSO—

That a gold medal be awarded to Wasudeo Ramchandra Dhobley.

BENGAL SECRETARIAT LIBRARY

The following are the names of the successful candidates :—

FIRST DIVISION.

In order of merit.

1	Wasudeo Ramchandra Dhobley	...	Morris College, Nagpur
2	Bandyopadhyay, Saratchandra	...	Metropolitan Institution
3	Ray, Jnanadakisor ..	...	Dacca College
4	Bandyopadhyay, Sasibhushan	...	City College
5	Muhammad Mustafa Khan	..	Ripon College

SECOND DIVISION.

In order of merit.

1	Gupta, Nalinchandra	...	Metropolitan Institution
2	Chattopadhyay, Asutosh	...	Ripon College
3	Ghosh Bipinbihari	...	Ditto
4	Muhammad Azizul Haq	...	Hughli College
5	Chattopadhyay, Jitendraprasad	...	Ripor College
6	Bhattacharyya, Munindranath	...	Metropolitan Institution
7	Datta, Bankubihari		Ditto
8	Basu, Charuchandra	...	Ripon College
9	Biswas, Kshirodkrishna	...	Ditto
10	Bandyopadhyay, Atulkrishna	...	City College
	Basu, Dinanath	...	Metropolitan Institution
12	Chattopadhyay, Upendranath	...	Ripon College
13	Hemayat Uddin Ahmad	...	Dacca College
14	Baral, Syamdas	...	City College
	Ray Trailokyanath	...	Ditto
16	Mitra, Adharchandra	..	Metropolitan Institution
17	Mitra, Jatindralal	...	Ripon College
18	Mukhopadhyay, Jogindranath	...	Agra College
	Thakur, Harikinkar	...	Metropolitan Institution
20	Sen, Radhikamohan	...	Berhampur College
21	Chakrabarti, Chandrakumar	...	City College
22	Lahiri, Saratchandra	...	Metropolitan Institution
23	Guha, Annadacharan	...	Ripon College
24	Majumdar, Chandrasekhar	...	City College
25	Kumar, Nrityagopal	...	Ripon College
	Mahbubar Rahman	...	Ditto
27	Mandal, Ramkrishna	...	City College
	Mukhopadhyay, Rasbihari	...	Dacca College
	Pal, Annadaprasad	...	Metropolitan Institution
	Sen, Bishnupada	...	Ditto
31	Sarkar, Bhabataran	...	Ditto
32	Ghosh, Saratchandra	...	Hughli College
33	Datta, Chandrakisor	...	Ripon College
	Mukhopadhyay, Amritasekhar	...	Berhampur College
35	Chattopadhyay, Girijabhushan	...	Ripon College
	Chattopadhyay, Gopalchandra	...	Rajchandra College, Barisal
37	Hajra, Digendrachandra	...	Dacca College
38	Dasgupta, Umeschandra	...	Ditto
	Ghosh, Lalitmohan	...	Ripon College
40	Raha, Basantakumar	...	Ditto
41	Das, Abinaschandra	..	Metropolitan Institution
	Sarkar, Nandalal	...	Ripon College
43	Barkakati, Ramakanta	...	City College
44	Mitra, Charuchandra	...	Ripon College
45	Sen, Rajanikanta	...	City College

On the result of the B. L. Examination the Ritchie prize was awarded to Wasudeo Ramchandra Dhobley.

216. The Registrar enquired on what date the annual Convocation for conferring degrees would be held.

RESOLVED—

That the annual Convocation for conferring degrees be held on Saturday, January 23rd.

217. The Registrar enquired whether it would be necessary to prescribe another book in English for the Entrance Examination of 1894.

RESOLVED—

That it is not necessary to change the text-book.

218. Read the report of the Committee appointed by the Syndicate on the 21st June, 1890, submitting a set of revised forms of application for admission to the F. A., B. A. and B. L. Examinations, in accordance with their resolution, dated the 26th July, 1890.

RESOLVED—

That the Syndicate recommend to the Senate, that the following alterations be made in the forms of application for admission to the F. A., B. A. and B. L. examinations :—

F. A. APPLICATION.

For "*Period or periods of study since passing the Entrance Examination.*

Affiliated Institution or Institutions at which the candidate has studied.	Period or periods of continuous study.	Signature* of Principal or Head Master of Affiliated Institution.

* In the case of broken periods of study at different Institutions, it is expected that Principals or Head Masters will satisfy themselves that the different periods of study amount in the aggregate to two years before admission to the Examination."

substitute

"*Particulars to be filled in by the Principal.*

College.	Date of admission.	Number of Lectures in													
		English.		Mathematics.		2nd Language.		Physics.		Chemistry.		History.		Logic.	
		Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)

Principal.

(a) In the case of students transferred from one College to another the number of lectures under this head must be the whole number delivered in the Institution from the date of the transfer certificate on which the student was admitted, to the date of submission of the application, or to the date on which a transfer certificate is granted.

(b) This number must not include any lectures attended before the receipt of the transfer certificate."

B. A. APPLICATION.

For "*Period or periods of study since passing the First Examination in Arts.*

Affiliated Institution or Institutions at which the candidate has studied.	Period or periods of continuous study.	Signature of Principal or Head Master of affiliated Institution."

substitute

"*Particulars to be filled in by the Principal.*

College.	Date of admission.	Number of Lectures in					
		English. (1)		Second compulsory subject (2).		Optional subject (2).	
		Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)	Delivered. (a)	Attended. (b)

Principal.

(1) Pass and Honour lectures are to be taken together.

(2) The subject must be named.

(a) In the case of students transferred from one College to another the number of lectures under this head must be the whole number delivered in the Institution from the date of the transfer certificate on which the student was admitted, to the date of the submission of the application, or to the date on which a transfer certificate is granted.

(b) This number must not include any lectures attended before the receipt of the transfer certificate."

B. L. Application.

After "Particulars to be filled in by the Candidate.
Age.
Date of graduation.
Present occupation.
Religion."
add

" *Particulars to be filled in by the Principal.*

Colelge	Date of admission.	Number of Lectures in															
		1 The Principles of Jurisprudence. The History and Constitution of the Courts of Law and Legislative Authorities in India.		2 The Law relating to persons in their public and private capacities including the Law of Testamentary Succession.		3 The Law of Property including the Law relating to Land Tenures and Revenue Laws		4 The Law of Property including the Laws of Transfer, Prescription and Pre-emption.		5 The Law of Contracts and Torts.		6 The Law of Crimes and Criminal Procedure		7 The Law of Civil Procedure including the Law of Evidence and Law of Limitation.		8 The Hindu Law and the Mahomedan Law (with the exception of parts already included) and the Law of Intestate Succession.	
		Delivered.	Attended. (a)	Delivered.	Attended. (a)	Delivered.	Attended. (a)	Delivered.	Attended. (a)	Delivered.	Attended. (a)	Delivered.	Attended. (a)	Delivered.	Attended. (a)	Delivered.	Attended. (a)

Principal.

(a) This number must not include any lectures attended before the receipt of the transfer certificate."

219. Read a letter from the Under-Secretary to the Government of India, in the Home Department, stating, in reply to this office letter No. 1732, dated the 17th November, 1891, that the Governor-General in Council is pleased to permit the M. A's. and holders of corresponding degrees in the other Faculties of the University to elect two of their number to be Fellows, subject to the approval of His Excellency the Chancellor.

ORDERED—

To be recorded.

220. Read a letter from the Under-Secretary to the Government of India, in the Home Department, stating, in reply to this office letter No. 1700, dated the 7th October, 1891, that all Local Governments and Administrations, including Political Officers in Native States, have been requested to issue instructions similar to those issued by the Government of Bengal, to ensure a correct record of the votes of the graduates who will not be able to appear in person at the Senate House to take part in the election of Fellows.

ORDERED—

To be recorded.

221. Read an application from the Principal, St. John's College, Jaffna, requesting that the College may be affiliated to the University in Arts up to the F. A. standard.

RESOLVED—

That an application be made to the Government of India in the Home Department, requesting the Governor-General in Council to affiliate St. John's College, Jaffna, in Arts up to the standard of the F. A. Examination.

222. Read a letter from the Professor in charge of the Civil Engineering College, Sibpur, requesting that the Principal of the College may be annually supplied with the marks gained by the successful L. E. and B. E. candidates, which, under the orders of the Government of Bengal, are henceforth to be entered in their certificates.

RESOLVED—

That the marks be supplied annually as requested.

223. Read an application from Sailaprasad Mukhopadhyay, praying that, under the circumstances set forth

in his application, he may be allowed to appear at the B. A. Examination in 1893 as a teacher.

RESOLVED—

That Sailaprasad Mukhopadhyay be admitted to the B. A. Examination, provided he satisfies the other requirements of the University.

224. Read a letter from Babu Mohinimohan Ray, a member of the Syndicate, forwarding an application from Satkari Chatterjee, praying that, under the circumstances therein set forth, he may be allowed to appear at the B. L. Examination of 1892.

RESOLVED—

That Satkari Chatterjee be admitted to the B. L. Examination of 1892, provided he attends 75 per cent. of the lectures delivered from November, 1891, to October, 1892.

225. Read endorsements from the Principal, Ripon College, forwarding applications from Ramanimohan Das and Asutosh Mukerjee, praying that they may be allowed to appear at the next B. L. Examination on their fulfilling such conditions as the Syndicate may name.

RESOLVED—

That the Principal be informed that Ramanimohan Das and Asutosh Mukerjee will be admitted to the B. L. Examination of 1892, provided they attend 75 per cent. of the lectures delivered from June, 1891, to May, 1892.

226. Read the following letter from Babu Asutosh Mukhopadhyay :—

"To

THE REGISTRAR, CALCUTTA UNIVERSITY.

SIR,

May I request the favour of your submitting, for the consideration of the Syndicate, the following matter in connection with paras. 2 and 4 of the F. A. Regulations, and paras. 2 and 5 of the B. A. Regulations.

The Regulations provide that if a candidate fails to pass an examination, he cannot be admitted to a subsequent examination unless he has prosecuted a regular course of study for six months since the date of the last examination to which he was admitted. But there appears to be no provision in the regulations for the following classes of students:—

(1) A student reads for two years after passing the Entrance Examination, but does not appear at the F. A. Examination.

(2) A student, similarly qualified, sends in his fee, but does not present himself for examination.

(3) A student, who has once failed, reads for six months, but does not appear at the next examination.

(4) A student, similarly qualified, sends in his fee, but does not appear.

As I have said, the cases of such students are unprovided for in the regulations, and I know that the same rule has not always been applied to them I

would propose that no student should be admitted to the examination who has not attended lectures for six months *during the session* in which the examination is held. A portion of the course (*e.g.*, English and History) is changed every year, and it would be an advantage to the students to attend an additional course of lectures; to relax the rule seems to me to be putting a premium upon idleness.

The same remarks apply to the B. A. Examination.

BHAWANIPUR, *6th December, 1891.* } Yours, &c., (Sd.) ASUTOSH MUKHOPADHYAY.

RESOLVED—

That the Syndicate do not think it advisable to change the Regulations.

227. Read a petition from Hirendranath Datta, a Law student of the Ripon College, (supported by a certificate from the Principal,) praying that, under the circumstances set forth in the petition, he may be allowed to appear at the B. L. Examination in November, 1892.

RESOLVED—

That Hirendranath Datta be infromed that he cannot be admitted to the B. L. Examination until 1893.

228. Read an application from Kaliprasanna Banerjee, supported by a certificate from the Principal, Ripon College, praying that, under the circumstances stated in the application, he may be allowed to appear at the next B. L. Examination.

RESOLVED—

That Kaliprasanna Banerjee must attend lectures for a full year before he is admitted to the B. L. Examination.

229. Read an endorsement from the Principal, City College, forwarding an application from Paresnath Raychaudhuri, praying that he may be permitted to appear at the next B. L. Examination.

RESOLVED—

That the Principal, City College, be informed that Paresnath Raychaudhuri must attend lectures for a full year before he is admitted to the B. L. Examination.

230. Read an application from Asutosh Bhattacharyya, a Law student in the Muir Central College, Allahabad, praying that he may be allowed to take his transfer to a Law College in Bengal.

RESOLVED—

That Asutosh Bhattacharyya be admitted to the B. L. Examination, provided (1) that he attends lectures at a

College in Bengal for at least one full year, and (2) that the total period of attendance at lectures, including those attended in Allahabad, be not less than that required by the Regulations.

231. Read an invitation from the University of Dublin to send a representative to attend the Tercentenary Festival of the University to be held in July, 1892.

RESOLVED—

That Sir Alfred Croft be requested to represent the University of Calcutta at the Tercentenary Festival of the Dublin University, and that Mahamahopadhyay Mahesachandra Nyayaratna be requested to write a reply to the invitation in Sanskrit.

232. Read a letter from the Deputy-Secretary to the Government of India, in the Home Department, stating, in reply to this office letter No. 1766, dated the 24th November, 1891, that the Governor-General in Council is pleased to sanction the affiliation of the Murari Chand High School, Sylhet, to the University in Arts up to the F. A. standard.

ORDERED—

To be recorded.

233. Read an endorsement from the Director of Public Instruction, Bengal, forwarding copy of a letter from the Deputy-Secretary to the Government of India, in the Home Department, intimating that the Governor-General in Council has been pleased to select Mr. T. H. Holland, A. R. S. M., for the appointment of Lecturer on Geology at the Presidency College.

ORDERED—

To be recorded.

234. Read a letter from the Registrar, Allahabad University, forwarding copy of a resolution passed by its Syndicate regarding the question of recognition of schools preparing candidates for the Entrance Examination.

RESOLVED—

That the letter be referred to the Committee appointed by the Senate to consider the rules regarding the affiliation of colleges and recognition of schools.

235. The following remuneration bills were passed :—

B L EXAMINATION.

NAMES.	Subjects.	Fee for setting.			Fee for examining answer papers			Total.			Income Tax.			Net amount.		
W. Gordon Leith, Esq. ...	Jurisprudence and Criminal Law.	120	0	0	657	8	0	777	8	0	20	3	11	757	4	1
J. G. Apcar, Esq. ...	Contract and Torts and Criminal Procedure.	120	0	0	652	8	0	772	8	0	20	1	10	752	6	2
Babu Amarendranath Chatterjee	Real Property and Hindu Law.	240	0	0	646	4	0	886	4	0	23	1	3	863	2	9
Maulavi Serajul Islam, Khan Bahadur ...	Civil Procedure and Mahomedan Law.	160	0	0	648	12	0	808	12	0	21	0	11	787	11	1
Total Rupees ..		640	0	0	2,605	0	0	3,245	0	0	84	7	11	3,160	8	1

HONOURS IN LAW

NAMES.	Subjects.	Fee for setting.			Fee for examining answer papers.			Total.			Income Tax.			Net amount.		
A. P. Handley, Esq. ..	Jurisprudence, &c.	300	0	0	22	8	0	322	8	0	8	6	4	314	1	8
Babu Srinath Das ...	Hindu Law, &c.	300	0	0	22	8	0	322	8	0	8	6	4	314	1	8
Total Rupees ...		600	0	0	45	0	0	645	0	0	16	12	8	628	3	4

PREMCHAND ROYCHAND STUDENTSHIP EXAMINATION.

NAMES.	Subjects.	Fee for setting.			Fee for examining answer papers.			Total			Income Tax.			Net amount.		
C. H. Tawney, Esq., C. I. E. .	English.	400	0	0	48	0	0	448	0	0	11	10	8	436	5	4
Dr. D. Duncan ...	Philosophy.	400	0	0	24	0	0	424	0	0	11	0	8	412	15	4
Dr. A. F. R. Hoernle ...	Philology.	400	0	0	12	0	0	412	0	0	10	11	8	401	4	4
H. M. Percival, Esq. ...	Latin.	400	0	0	.....			400	0	0	10	6	8	389	9	4
M. Prothero, Esq. ...	History.	400	0	0	12	0	0	412	0	0	10	11	8	401	4	4
Babu Krishnakamal Bhattacharyya ..	Sanskrit.	400	0	0	24	0	0	424	0	0	11	0	8	412	15	4
Total Rupees ...		2,400	0	0	120	0	0	2,520	0	0	65	10	0	2,454	6	0

M. A.

NAMES.	Subject.	Fee for setting.	Fee for examining answer papers.	Total.	Income tax.	Net amount.
K Deighton, Esq.	English ...	300 0 0	.....	300 0 0	7 13 0	292 3 0
M J. White, Esq.		300 0 0	.....	300 0 0	7 13 0	292 3 0
Charles H. Tawney, Esq., C. I. E. ...		.....	207 0 0	207 0 0	5 6 3	201 9 9
H. M. Percival, Esq		.....	678 0 0	678 0 0	17 10 6	660 5 6
A. C. Edwards, Esq		.....	414 0 0	414 0 0	10 12 6	403 3 6
Babu Kalicharan Banerjee	Philosophy ...	300 0 0	177 0 0	477 0 0	12 6 9	464 9 3
Dr G. Thibaut		300 0 0	177 0 0	477 0 0	12 6 9	464 9 3
W Booth, Esq.	Mathematics ...	300 0 0	63 0 0	363 0 0	9 7 3	353 8 9
Babu Asutosh Mukhopadhyay, F. R. A S., F. R. S. E.		300 0 0	63 0 0	363 0 0	9 7 3	353 8 9
M Prothero, Esq	History ...	.....	72 0 0	72 0 0	1 14 0	70 2 0
Col. H. S. Jarrett	Arabic ...	600 0 0	18 0 0	618 0 0	16 1 6	601 14 6
Col. H. S. Jarrett	Persian ...	300 0 0	9 0 0	309 0 0	8 0 9	300 15 3
Shamsul Ulama Shaikh Mahmud Gilani		300 0 0	9 0 0	309 0 0	8 0 9	300 15 3
Mahamahopadhyay Chandrakanta Tarkalankar	Sanskrit ...	200 0 0	36 0 0	236 0 0	6 2 4	229 13 8
Babu Krishnakamal Bhattacharyya ...		200 0 0	36 0 0	236 0 0	6 2 4	229 13 8
Babu Nilmani Mukerjee		200 0 0	36 0 0	236 0 0	6 2 4	229 13 8
Dr. A. F. R. Hoernle		100 0 0	3 0 0	103 0 0	2 10 11	100 5 1
J. Eliot, Esq.	Physics ..	300 0 0	45 0 0	345 0 0	8 15 9	336 0 3
A. Macdonell, Esq.		300 0 0	45 0 0	345 0 0	8 15 9	336 0 3
W. McMillan, Esq	Chemistry ...	300 0 0	9 0 0	309 0 0	8 0 9	300 15 3
Rai Taraprasanna Ray Bahadur, F.C.S.		300 0 0	9 0 0	309 0 0	8 0 9	300 15 3
	Total Rupees ..	4,900 0 0	2,106 0 0	7,006 0 0	182 7 2	6,823 8 10

(Confirmed),
GOOROO DASS BANERJEE
Vice-Chancellor.

A. M. NASH,
Registrar.

MINUTES

OF THE

FACULTY OF ENGINEERING

FOR THE YEAR 1891-92.

No. 3.

THE 28TH DECEMBER, 1891.

Present:

COL. J. M. MCNEILE, R.E., *President, in the Chair.*

THE HON'BLE SIR ALFRED CROFT, K. C. I. E.
J. S. SLATER, ESQ.
RAI KSHETRANATH CHATTERJEE, BAHADUR, M. I. C. E.
W. H. JOBBINS, ESQ.
J. H. APJOHN, ESQ., M. I. C. E.

236. The Faculty met to consider the proposal made by the Director of Public Instruction, Bengal, that an alternative course for Mining Engineers should be introduced into the University curriculum.

RESOLVED—

That the Faculty are of opinion that it is not advisable to introduce an alternative course for Mining Engineers into the University curriculum, but that the necessary practical and theoretical training should be given to the students after passing the B. E. or L. E. Examination, and that the certificates of having undergone such training should be granted by the College authorities.

A. M. NASH,
Registrar.

(Confirmed),

J. M. MCNEILE, COL., R.E.,
President.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 10.

THE 9TH JANUARY, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROODAS BANERJEE, D. L., *Vice-Chancellor, in the Chair.*

CHARLES H. TAWNEY, ESQ., C. I. E.
BABU MOHINI MOHAN RAY.
E. A. BIRCH, ESQ., M. D.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.

237. The Minutes of the meeting of the Syndicate held on the 12th December were read and confirmed.

238. Read the Minutes of the Faculty of Engineering, dated the 1st, 7th, and 28th December.

RESOLVED—

1. That a copy of the Resolution of the Faculty regarding the abolition of the F. E. Examination and the reduction of the course from four years to three be forwarded to the Director of Public Instruction, Bengal.

2. That the Syndicate, while accepting the Resolution of the Faculty, that it is not advisable to introduce a special course for Mining Engineers into the curriculum for the B. E. and L. E. examinations, request the Faculty to consider whether such a course might not with advantage be introduced into the examination for Honours in Engineering either as an additional or as an alternative subject.

239. Read a letter from the Deputy Secretary to the Government of India in the Home Department, intimating that the Governor-General in Council has been pleased to re-appoint the Honourable Dr. Gooroo Dass Banerjee to be Vice-Chancellor of the University.

ORDERED—

To be recorded.

240. Read the following report of the Examiners for the recent M. A. Examination :—

"FROM

THE BOARD OF EXAMINERS
FOR THE M. A. EXAMINATION,

TO

THE REGISTRAR,
CALCUTTA UNIVERSITY.

Dated Calcutta, the 6th January, 1892.

SIR,

We have the honour to submit, for the approval of the Vice-Chancellor and Syndicate, the result of the M. A. Examination.

The number of candidates registered for the Examination in English was 85, of whom 26 passed, 50 failed, and 9 were absent. Of the successful candidates, 2 were placed in the First class, 14 in the Second, and 10 in the Third.

The number of candidates in Sanskrit was 6, of whom 5 passed and 1 failed. Of the successful candidates 3 were placed in the First class, 1 in the Second, and 1 in the Third.

The number of candidate in Persian was 1, who passed and was placed in the First class.

The number of candidate in Arabic was 1, who passed and was placed in the First class.

The number of candidates in History was 5, of whom 2 passed, 2 failed and 1 was absent. Of the successful candidates one was placed in the First class and one in the Second.

The number of candidates in Mental and Moral Philosophy was 21, of whom 9 passed and 12 failed. Of the successful candidates 1 was placed in the Second class and 8 in the Third.

The number of candidates in Mathematics was 9, of whom 3 passed, 4 failed, and 2 were absent. All the successful candidates were placed in the Third class.

The number of candidate in Natural and Physical Science (A) was 1 who failed.

The number of candidates in Natural and Physical Science (B) was 5, all of whom passed. Of the successful candidates 2 were placed in the First class, 2 in the Second and 1 in the Third.

We beg to recommend Jyotibhushan Bhaduri, of the Presidency College, who obtained a First class in Physics, as eligible for the Gilchrist Scholarship.

We beg futher to recommend the undermentioned successful candidates, who were placed in the First class as eligible for the Governmen. Scholarship :—

ENGLISH.

CLASS I.

1 Satischandra Bandyopadhyay ... Agra College
2 Satischandra De ... Presidency College

PERSIAN.

CLASS I.

Gholam Ghous ... Presidency College

PHYSICS.

CLASS I.

Jyotibhushan Bhaduri ... Presidency College

We have the honour to be,
SIR,
Your most obedient Servants,

(Sd) CHARLES H. TAWNEY.
,, H. S. JARRETT.
,, NILMANI MUKERJI.
,, TARAPRASANNA RAY.
,, শ্রী চন্দ্র কান্ত শর্ম্মা
,, H. M. PERCIVAL.
,, ASUTOSH MUKHOPADHYAY
,, A. MACDONELL.
,, K. C. BANERJEE.

RESOLVED—

That the Report be adopted and the names of the successful candidates published in the *Gazette*. The following are the names of the successful candidates :—

ENGLISH.

CLASS I.

In Order of Merit.

1	Bandyopadhyay, Satischandra	...	Agra College
2	De, Satischandra ...	...	Presidency College

CLASS II.

In Order of Merit.

1	Gangopadhyay, Gopalchandra	...	Presidency College
2	Chandra, Atulchandra	...	Ditto
3	Datta, Atulchandra ...	...	Metropolitan Institutio
4	,, Nagendranath ..	...	Presidency College
5	Som, Nirmalabala ...	...	Private student
6	Bhattacharyya, Nandalal	...	Teacher
7	Datta, Bhubanmohan ...	...	Ditto
8	Chattopadhyay, Prabodhchandra	...	Presidency College
	Das, Rebatimohan ..	...	Ditto
10	Manekji Merwanji Mulln	...	Morris College
11	Das, Satyendranath ...	...	Private student
12	Basu, Charuchandra ...	..	Ditto
13	Ray, Girindralal ..	...	Metropolitan Institution
14	Chattopadhyay, Jadunath	...	Private student

CLASS III.

In Order of Merit.

1	Mitra, Nilmani ..	...	Private Student
2	Guptaray, Upendralal ..	..	Dacca College
3	Bandyopadhyay, Bhubaneswar	...	Metropolitan Institution
4	Mitra, Debendrakumar	...	St. Xavier's College
5	Ghosh, Narendrakumar	...	Private student
6	Biswas, Jagadhballabh	...	Presidency College
7	Mitra, Srikanta ...	.	Private student

8	Chattopadhyay, Sriram	...	Private student.
9	Chaudhuri, Surendranarayan	...	Victoria College, Cooch Behar
	Goswami, Purnachandra	...	Private student

SANSKRIT.

CLASS I.

In Order of Merit.

1	Bhattacharyya, Asutosh	...	Sanskrit College
2	Sadashiva Jairam Dehadrai	...	Private student
3	Niyogi, Sasikumar ...	...	Sanskrit College

CLASS II.

Bandyopadhyay, Harendranath ... Sanskrit College

CLASS III.

Bhattacharyya, Rampran ... Sanskrit College

ARABIC.

CLASS I.

Sh. Bahadur Ali ... ... M. A. O. College

PERSIAN.

CLASS I.

Gholam Ghous ... ... Presidency College

HISTORY.

CLASS I.

Sen, Bipinbihari ... ... Free Church of Scotland's Institution and Duff College

CLASS II.

Bandyopadhyay, Srischandra ... Private student

MENTAL AND MORAL PHILOSOPHY.

CLASS II.

Mukhopadhyay, Jahnabicharan ... Hughli College

CLASS III.

In Order of Merit.

1	Sengupta, Prabadhprakas	...	Presidency College
2	Das, Ramanimohan ...	...	Private student
3	Sen, Debendranath ...	...	Free Church of Scotland's Institution and Duff College
4	Ezekiel, John ...	...	Bishop's College
5	Mallik, Indumadhab ...	...	Private student.
6	Datta, Harischandra ...	...	Ditto
7	Bardhan, Gobindachandra	...	Presidency College
8	Sarkar, Manmathanath	...	Ditto

MATHEMETICS.

CLASS III.

In Order of Merit.

1	Mitra, Kumadbihari ...	...	Presidency College
2	Raychaudhuri, Bipindrakumar	...	Ditto
3	Sen, Ambikaprasad ...	...	Ditto

NATURAL AND PHYSICAL SCIENCE (B).

CLASS I.

In Order of Merit.

1 Biswas, Kunjabihari ... ... Presidency College
2 Bhaduri, Jyotibhushan ... Ditto

CLASS II.

In Order of Merit.

1 Sen, Kshiradlal ... ... Presidency College
2 Ghosh, Dasarathi ... ... Ditto

CLASS III.

Krishna Lakshman Paonaskar ... Jabalpur College

On the result of the last M. A. Examination the Sonamani Prize was awarded to Asutosh Bhattacharyya of the Sanskrit College.

241. Read an endorsement from Babu Gaurisankar De, a member of the Senate, forwarding an application from Hemkumar Niyogi, an unsuccessful candidate at the recent M. A. Examination, praying that he may be allowed to pass by grace marks.

RESOLVED—

That Babu Gaurisankar De be informed that the case of Hemkumar Niyogi was referred to the Examiners, and that they decided not to pass him.

242. Read a letter from the Under-Secretary to the Government of India in the Home Department, intimating that the Governor-General in Council has been pleased to sanction the affiliation of St. Mary's School, Chandernagore, to the University in Arts up to the F. A. standard, with effect from the 23rd June, 1890.

ORDERED—

To be recorded.

243. Read an endorsement from the Magistrate of Burdwan, forwarding, with reference to this office letter No. 1717, dated the 6th November, 1891, copy of a letter from the Subdivisional Officer of Calna, reporting that the local Police have, after due investigation, failed to trace out Suryyakumar Sen in the village of Bahar Kuli.

ORDERED—

To be recorded.

244. Read an application from Mahadewa Prasad. supported by the written consent of the Registrar, Allahabad University, praying that he may be permitted to appear at the M. A. Examination in 1892.

RESOLVED—

That Mahadewa Prasad be admitted to the M. A. Examination.

245. Read an application from Parameshvari Sahaya, supported by the written consent of the Registrar, Panjab University, praying that he may be permitted to appear at the B. A. Examination of 1893.

RESOLVED—

That Parameshvari Sahaya be admitted to the B. A. Examination of 1893, provided he satisfies the other requirements of the University.

246. Read a letter from the Principal, Berhampur College, forwarding an application from Girischandra Sanyal, a Law student in the College, praying that, under the circumstances set forth in the application, he may be exempted from the operation of the rule which requires attendance for a full session for making up deficiency in the percentage of attendance.

RESOLVED—

That Girischandra Sanyal be admitted to the next B. L. Examination.

247. Read a letter from Babu Priyanath Ghosh, forwarding an affidavit made by Saratchandra Mitra, in support of his application for the correction of a mistake, as regards age, in his certificate of having passed the Entrance Examination.

ORDERED—

That the applicant be informed that the affidavit submitted is insufficient and unsatisfactory, and therefore cannot be accepted.

248. Read a letter from M Vakil, requesting to be informed whether a person who is a B. A. of the Bombay University and a Licentiate of the Society of Apothecaries of London, will be permitted to appear at the M. B. Examination of this University.

RESOLVED—

That M. Vakil be informed that the Licence of the Society of Apothecaries of London does not qualify for admission to the M. B. Examination.

249. A letter from Will. Griffith, Esq., Barrister-at-Law, and Author of the "Institutes of Equity" and other treatises on Indian Law, requesting that he may be supplied with a copy of the Tagore Law Lectures in future.

RESOLVED—

That the Syndicate regret that they are unable to comply with the request.

250. Read a letter from Mr. Egerton Allen, formerly a Fellow of the University, requesting that he may be supplied with copies of the Tagore Law Lectures for 1886 and 1887.

RESOLVED—

That the Tagore Lectures for 1886 and 1887 be supplied as requested.

251. The undermentioned gentlemen were appointed Moderators in Arts for 1892 :—

Nawab Abdool Luteef, Bahadur, C.I.E.
Charles H. Tawney, Esq., C.I.E.
Sir Alfred Croft, K.C.I.E.
Babu Asutosh Mukhopadhyay, F.R.A.S., F.R.S.E.

252. Read a letter from Mahamahopadhyay Maheschandra Nyayratna, C.I.E., a member of the Senate, suggesting that the compulsory use of the Devanagari character by candidates at the Arts Examinations should be put off till the matter is reconsidered by the Syndicate

RESOLVED—

That the compulsory use of the Devanagari Character be deferred till the examination of 1896.

253. Read a letter from the Principal, Jaffna College, Ceylon, requesting that the Entrance Examination may henceforth be held in the College.

RESOLVED—

Thet it is too late to make any change this year, and that the Director of Public Instruction, Ceylon, be requested

to state what is the most suitable place for holding the examination.

254. Read a letter from Baboo Jaganmohan Sarkar, Addtional Munsiff of Bankura, suggesting that the rule requiring the M. A 's. residing in the mofussil to have their votes attested by a Magistrate, should be relaxed in the case of voters who are gazetted officers of Government, and that their votes should be accepted when forwarded by them officially.

RESOLVED—

That in the opinion of the Syndicate it is premature to consider the question.

255. Read a letter from Babu Lalitkumar Banerjee, Professor of English, Berhampur College, offering certain suggestions regarding the mode of selecting text-books for the M. A. Examination in English.

RESOLVED—

That the letter be referred to the Board of Studies in English.

256. Read a letter from the Principal, Burdwan Raj College, forwarding a fresh transfer-certificate of Narayandas Ray, after correcting the mistakes pointed out in this office letter No. 1809, dated the 15th December, 1891, and inviting attention to certain unauthorised alterations in the original certificate alleged to have been made by the student.

RESOLVED—

1 That Narayandas Ray be called upon to explain the alterations made in the figures in the transfer-certificate.

2. That the Director of Public Instruction be requested to issue a circular directing the Principals of Colleges to use words instead of figures in stating the number of attendances.

257. Read an application from Babu Ambikacharan Ray, Head Master, Makordah School, praying that, under the circumstances stated in the application, he may be permitted to appear at the ensuing B. A. Examination as a teacher.

RESOLVED—

That the period of service as teacher is insufficient.

258. Read endorsements from the Principal, City College, forwarding applications from Janakinath Bhattacharyya and Hemendranath Sinha, praying that, under the circumstances set forth in their applications, they may be admitted to the B. L. Examination after further attendance at lectures for a year.

RESOLVED—

That the Principal be informed that each of the candidates must attend lectures for two years.

259. Read a letter from the Under-Secretary to the Government of India, in the Home Department, stating that the Governor-General in Council has been pleased to appoint the undermentioned gentlemen to be Fellows of the University :—

Prince Jahan Kadr Mirza Muhammad Wahid Ali, Bahadur
Rameshchunder Dutt, Esq., C.S.
Alexander Macdonell, Esq., M.A.
Maulavi Khuda Bakhsh, Khan Bahadur.
Rev. A. P. Begg, B.A.
Babu Kailaschandra Basu, L.M.S.
Babu Upendranath Mitra, M.A., B.L..
Babu Prannath Pandit, M.A., B.L.

ORDERED—

That the Fellows be distributed as follows :—

Prince Jahan Kadr Mirza Muhammed Wahid Ali, Bahadur.	In Arts.
Rameshchunder Dutt, Esq., C.S.	In Arts.
Alexander Macdonell, Esq., M.A.	In Arts.
Rev. A. P. Begg, B.A.	In Arts.
Babu Upendranath Mitra, M.A., B L.	In Arts.
Babu Prannath Pandit, M.A., B.L.	In Arts.
Maulavi Khuda Bakhsh, Khan Bahadur	In Law.
Babu Upendranath Mitra, M.A., B.L.	In Law.
Babu Prannath Pandit, M.A., B.L.	In Law.
Babu Kailaschandra Basu, L.M.S. ...	Medicine.
Alexander Macdonell, Esq., M.A. ...	Engineering.

(Confirmed), A. M. NASH,
GOOROO DASS BANERJEE, *Registrar.*
Vice-Chancellor.

MINUTES OF THE SENATE

FOR THE YEAR 1891-92.

No. 5.

THE 16TH JANUARY, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,

Vice-Chancellor, in the Chair.

RAI KANAILAL DE, BAHADUR, F.C.S., C.I.E.
A. M. BOSE, ESQ.
BABU SURYYA KUMAR SARBADHIKARI.
A. M. NASH, ESQ.
THE REV. K. S. MACDONALD, D.D.
BABU GAURISANKAR DE.
RAI KSHETRANATH CHATTERJEE, BAHADUR, M.I.C.E.
BABU NITYANANI MUKERJEE.
BABU DURGAMOHAN DAS.
BABU HARAPRASAD SASTRI.
BABU UMESCHANDRA DATTA.
J. C. BOSE, ESQ., B. SC.
BABU ASUTOSH MUKHOPADHYA F.R.A.S., F.R.S.E.
THE REV. H. WHITEHEAD.
BABU BIPINBIHARI GUPTA.
RAI GUNABHIRAM BARUYA, BAHADUR.
THE REV. A. P. BEGG.
BABU KAILASCHANDRA BASU.
BABU UPENDRANATH MITRA.
BABU PRANNATH PANDIT.

260. The Vice-Chancellor said :—"Before we proceed to the business of the day, I am sure my learned colleagues will all join with me in expressing our profound sorrow for the great loss we have sustained by the untimely death of a Prince who, in the natural order of events, would have been our future Ruler, and who had endeared himself so much to the people of this country by his recent visit. A respectful expression of loyal sympathy is the only tribute which we can offer to our beloved Sovereign in this dread hour of affliction. I leave it to my colleagues to say in what shape they desire to have our expression of sorrow recorded."

Mr. Anando Mohun Bose said :—" After what has fallen from you, Mr. Vice-Chancellor, it is hardly necessary that any words should be added to express our deeply-felt sorrow upon this melancholy occasion. It is a sad occasion, one of the saddest within my recollection, for the sorrows of the Royal Family are the sorrows of the people over whom Her Gracious Majesty has reigned so beneficently and so wisely for these series of years, and with whose sorrows she has always deeply sympathised. It is not necessary, as I have said, for me to add anything to what has fallen from you ; but I would venture to say—and I am sure the proposal will meet with the concurrence of every one—that before we proceed to the business of the meeting, we record our heartfelt sorrow at the sad loss which the Royal Family of England has sustained, and that we tender our loyal and respectful condolence to Her Majesty the Queen-Empress and the Royal Family on this occasion. As to the form of words, I leave it to you, Sir, to put it in the best form , but this expression of our sincere grief, I think ought to be embodied in our proceedings before we proceed to transact the business before us."

The Rev. Dr. K. S. Macdonald said :—" I have to second the resolution. I think the expression of sympathy should embrace the Royal Father of the young Prince, the Prince of Wales, who is himself a member of this University."

The resolution was couched in the following terms and carried unanimously :—" The Senate record their deep sense of sorrow at the heavy loss sustained by the untimely death of His Royal Highness the Duke of Clarence and Avondale, and their respectful sense of loyal sympathy for Her Gracious Majesty the Queen-Empress and their Royal Highnesses the Prince and Princess of Wales in their hour of affliction."

261. Babu Asutosh Mukhopadhyay moved that the undermentioned female candidates, who had passed the B. A. and M A. Examinations of 1891, be admitted to their respective degrees :—

B. A.

Datta, Jibanbala ... Bethune College.

M. A.

Som, Nirmalabala	...	Private Student.

The Rev. Dr. K. S. Macdonald seconded the motion which was put to the vote and carried unanimously.

262. Babu Asutosh Mukhopadhyay moved that the undermentioned successful B. A. and M. A. candidates of 1891, who had not prosecuted a regular course of study in an affiliated institution, be admitted to their respective degrees :—

B. A.

Aich, Ramaprasad ...	...	...	Teacher.
Bhuniya, Upendranath	...	...	,,
Mitra, Basantakumar	...	...	,,
Mukhopadhyay, Satischandra	...	...	,,
Sen, Baradakanta ...	...	...	,,
,, Sasadhar ...	...	...	,,

M. A.

Bandyopadhyay, Srischandra	...	Private Student.
Basu, Charuchandra	...	,,
Bhattacharyya, Nandalal	...	Teacher.
Chattopadhyay, Jadunath	...	Private Student.
,, Sriram	...	,,
Das, Ramanimohan	...	,,
,, Satyendranath	...	,,
Datta, Bhubanmohan	...	Teacher.
,, Harischandra	...	Private Student.
Ghosh, Narendrakumar	...	,,
Goswami, Purnachandra	...	,,
Mallik, Indumadhab	...	,,
Mitra, Nilmani ...	...	,,
,, Srikanta ...	...	,,
Sadashiva Jairam Dehadrai	...	,,

Babu Umeschandra Datta seconded the motion which was put to the vote and carried.

263. Babu Asutosh Mukhopadhyay moved that the following alterations be made in the forms of

application for admission to the F. A., B. A. and B. L, Examinations :—

F. A. APPLICATION.

For "*Period or periods of study since passing the Entrance Examination.*

Affiliated Institution or Institutions at which the candidate has studied.	Period or periods of continuous study.	Signature* of Principal or Head Master of affiliated Institution."

* In the case of broken periods of study at different Institutions, it i expected that Principals or Head Masters will satisfy themselves that the different periods of study amount in the aggregate to two years before admission to the Examination."

substitute

"*Particulars to be filled in by the Principal, &c*

| College. | Date of Admission. | Number of Lectures in | | |

B. A. APPLICATION.

For " Period or periods of study since passing the First Examination in Arts.

Affiliated Institution or Institutions at which the candidate has studied.	Period or periods of continuous study.	Signature of Principal or Head Master of affiliated Institution.'

substitute

"*Particulars to be filled in by the Principal, &c.*

College.	Date of Admission.	Number of Lectures in					
		English (1.)		Second Compulsory Subject (2.)		Optional Subject (2.)	
		Delivered (a.)	Attended (b.)	Delivered (a.)	Attended (b.)	Delivered (a.)	Attended (b.)

Principal.

(1. Pass and Honour lectures are to be taken together.
(2.) The subject must be named.
(a.) In the case of students transferred from one College to another, the number of lectures under this head must be the whole number delivered in the Institution from the date of the Transfer Certificate on which the student was admitted to the date of the submission of the application, or to the date on which a Transfer Certificate is granted.
(b.) This number must not include any lectures attended before the receipt of the Transfer Certificate."

B. L. Application.

After "particulars to be filled in by the candidate.
Age.
Date of graduation.
Present occupation.
Religion."
add

"*Particulars to be filled in by the Principal.*

College.	Date of Admission.	NUMBER OF LECTURES IN															
		1. The Principles of Jurisprudence, the History and Constitution of the Courts of Law and Legislative Authorities in India.		2. The Law relating to persons in their public and private capacities including the Law of Testamentary Succession.		3. The Law of Property including the Law relating to Land Tenures and Revenue Laws		4 The Law of Property including the Laws of Transfer, Prescription and Pre-emption.		5. The Law of Contracts and Torts.		6. The Law of Crimes and Criminal Procedure.		7. The Law of Civil Procedure including the Law of Evidence and Law of Limitation.		8. The Hindu Law and the Mahomedan Law (with the exception of parts already included) and the Law of Intestate Succession.	
		Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a)	Delivered.	Attended (a.)

Principal.

(a.) This number must not include any lectures attended before the receipt of the Transfer Certificate."

He said he wished to explain the reasons why these apparently complicated alterations had been recommended. No doubt the forms seemed to be very complicated, but he would be able to show that no question of principle was involved in them—in fact, they were merely formal changes which were necessary for better carrying out the Regulations of the University. They were aware that since the foundation of the University, one condition for admission to the examinations had been attendance at lectures in some affiliated institution. Up to the year 1889, the rule regarding the percentage of attendances was that no candidate was to be admitted to the higher examinations who had not attended at least 75 per cent. of the total number of lectures delivered on the subjects in which he was to be examined. This was generally believed to be the rule which governed all cases; but nobody seemed to know whether there was actually any such rule of the University, and if such a rule existed, where it was to be found, although there was an order to that effect (to be found in an old volume of the Minutes) passed by the Syndicate some twenty-five years ago. In 1889, the Senate took the matter into consideration and altered the Regulations so, that instead of having 75 per cent. in all subjects taken together, they decided it would be necessary for candidates to attend only 66 per cent., but that this percentage must be kept up in each of the subjects in which he was to be examined. That Regulation was passed in 1889 at the Annual Meeting of the Senate, and it was to have come into operation in March 1891, two years after. However, last year when the time for sending in applications arrived, it was discovered that this new changed Regulation had not been understood; that, in fact, the authorities of Colleges had not kept separate registers of attendance in each subject separately, and therefore the Syndicate last year decided that the old rules should be followed for 1891. It had therefore been suggested that the application forms should be altered in such a way that it might be clear to College authorities and to students what was required of them. Then, again, the year before last, the Senate and Syndicate when considering the subject of attendances at lectures, found out that the percentage rule was evaded—at least it was found out that if the rule was not followed in many cases owing to ignorance, it was evaded in some cases. It was suggested to the Syndicate that in

order to make evasion more difficult, the application forms should be altered in such a way that the number of lectures attended by each candidate should be mentioned in the application form, so that if the rule was to be evaded, it could be evaded only by falsifying the College records. Then, again, there was another reason why all these details had been introduced ; there was another difficulty which had to be met, and it was this ; if they referred to the old form they would find that one of the items to be filled up was "period of continuous study." The period required was two years, but how these two years was to be counted was not properly understood. A candidate, for instance, read for six months, remained at home for two, and then took transfer to another institution. What was to become of the two months, and how were the lectures to be counted in each College? This also was provided for in the new form.

Babu Durga Mohan Das seconded the motion.

Mr. Nash rose to propose an amendment. He wished to add a fresh footnote to the new application forms for the F. A., B. A. and B. L. examinations in place of footnote (a). This note he had drafted himself in committee, and its object was to explain what particulars were to be given in the tabular form. The note was drafted in accordance with a resolution of the Syndicate, on a recommendation from a previous committee that the following particulars should be given : the name of every College the student had attended during the course of study prescribed for the examinations, the date of admission, the total number of lectures delivered in each subject during the time the student had been on the rolls, and the number of attendances. The form was provided in order to enable Principals of Colleges to give all these particulars. It had been pointed out to him that the note appeared to imply that Principals could only give information relating to their own Colleges, and could not give any attendances in previous Colleges. As there seemed a doubt whether that interpretation could not be placed upon it, he had drafted a fresh note which he proposed for the approval of the Senate It ran as follows :—

"If a student has attended only one College during the two years of study required by the Regulations, this column must show the total number of lectures delivered in the College during the two

years, the lectures in each year being counted from the date on which the College opened after the summer vacation, and not from the date on which the student was admitted.

"If a student has attended more than one College during the two years, the lectures in the College first attended must be counted from the beginning of the session to the date on which a Transfer Certificate is given; in the College or Colleges subsequently attended the lectures must be counted from the date of the Transfer Certificate on which the student is admitted to the date on which a fresh Transfer Certificate is given, or to the date of application for admission to the F. A., B. A., or B. L. examination."

The note was merely a repetition of a portion of the Regulations already adopted by the Senate, and there was nothing new in the form except that the actual number of attendances must be given. It did not in reality involve any additional work upon Principals of Colleges, because at present the Principal of a College was not allowed to send up any candidate until he had satisfied himself that the candidate had attended 66 per cent. of lectures delivered not only in that particular College but in other Colleges as well during the two years. The only additional work was that these calculations were to be copied into the application forms.

Babu Asutosh Mukhopadhyay accepted the amendment.

The Rev. Dr. K. S. Macdonald said he was not quite satisfied whether he had read the original motion correctly as to the meaning of the different forms. Did it require the number of lectures at each College separately or taken together (the mover: "Separately; the name of the College to be placed at the head"). He should like to have that provided for. He thought it very desirable that the University should possess as much information as possible in regard to the working of affiliated Colleges. Part of the information required was as to the number of lectures given at different Colleges, the subjects and the number of attendances. He knew as a fact of a student coming up from one College to another after having obtained 66 per cent. in the first College, and thus not required to attend a single lecture in the other College. This College would therefore have the credit of passing him though he may not have attended a single lecture in it. This was an extreme case, but it was a fact. In many cases the Principal of the second College simply got a certificate stating the percentage of attendances, but he knew nothing of

the number of lectures delivered in the first College, or how many the student attended. He thought provision should be made to relieve the Principal of the second College from all difficulties under that head. It had been said that asking for all this information cast a suspicion upon the honesty and straightforwardness of the Principals of Colleges, and that it was an indication of want of confidence in them. He did not think so. He would be very sorry to look upon the action recommended by the Syndicate as suspicious, or implying want of confidence in the Principals of Colleges. He believed the Syndicate was satisfied with the conscientiousness of these Principals, and that the information required was wanted for a good purpose.

Mr. Nash said that in order to give effect to a suggestion made, he had to propose a formal amendment to substitute for the word "College" the words "College or Colleges attended during the two years," and to add as a footnote the words "the number of lectures delivered and attended in each College must be separately stated."

Mr. Anando Mohun Bose said he was disposed to propose as an amendment that the matter be referred back to the Syndicate for reconsideration, and for these reasons :—With reference to what had been pointed out by the last speaker, it seemed to him there were other matters in this connection which should be considered, and one of them was this. At present the Principal of the second College was helpless in the matter of filling up the form and it was necessary for him to do so. No means were provided compelling the filling up of these forms by the Principal of the College granting the Transfer and no means were therefore provided for the Principals sending up students for the examinations to be in a position to comply with these requisitions. There were one or two other matters which required consideration. The Principal had to make a statement that the student had attended two-thirds of the lectures up to the date of the submission of the application. This was a matter which required to be made plain, and for this reason · According to the present University Regulations this application should be submitted at least six weeks before the date of examination. Suppose in a College the last lecture was delivered in September,

the University could do nothing to him, because all it said was that the date of the application must be at least six weeks before the date of the examination. There was one limit, but the other was not fixed; therefore the door was left open to uncertainty for which there ought to be no room. He only suggested these as matters which required consideration. Again in footnote (1) of the B. A. application were Pass and Honor lectures to be taken together? No explanation was given on these points. He also understood now that the proposal before them was not the proposal which it was intended to put forward, and this was a further ground for postponement of the matter. Another matter was in reference to the necessity for certain Regulations which the University Act required in the Transfer Certificates. These were worthy of consideration. Further, in regard to the form itself, the learned mover had explained that the necessity for these elaborate forms had arisen either from ignorance or evasion. This necessity must be more clearly indicated, because as far as he knew there was not a single University which required Principals of Colleges to submit certificates in this form in order to send up students for examinations. He admitted there ought to be no room for ignorance in the matter, but the object in view could be met in a far different way—by adding a note in the existing form of certificate to the effect that in each subject there ought to be an attendance of 66 per cent. The question of evasion raised the far graver one of evasion with knowledge, which was really dishonesty. On all these grounds he moved as an amendment that the matter be referred back to the Syndicate for consideration.

Babu Umeschandra Datta seconded the amendment.

The Vice-Chancellor said :—" With reference to Mr. Bose's amendment which ought to be put to the vote first according to the usual practice, I would just offer one observation with a view to see if that would not meet the object which the learned mover had before him when he placed the amendment before the meeting. A difficulty has been pointed out that whilst these forms require the filling up of elaborate details by the head of the College to which the candidate last belonged, there is no means provided by the University

by which the head of the last institution can compel the authorities of institutions to which the candidate might previously have belonged to supply him with the necessary details. One answer to that would be, that it is always in the power of the head of any institution to refuse to admit any candidate until he knows for certain that the transfer which the candidate has brought from any other institution which he has attended is in a form which contains all the details which the University requires him to be acquainted with ; and as these forms will be circulated to heads of all institutions, both the institution giving a Transfer Certificate and the institution admitting the candidate on that Transfer Certificate, will know what information to give and what information to receive ; and, in that way, if there is no antagonistic spirit between the institutions giving and accepting these Transfer Certificates, there will be no difficulty at all. On the other hand, if there is any such antagonistic spirit existing, the University could not by making any rules very well meet the difficulty ; so that if the learned mover will take this into consideration it would be for him to say whether he would or would not still consider it necessary that the amendment should be insisted upon.

There is another point which calls for some remarks. Whatever may have been the historical origin of this discussion, we may altogether forget the past with all its unpleasantness and look to the future. The object with which these forms have been prescribed does not in the least imply any want of confidence on our part in the heads of Colleges affiliated to the University. If the University is wanting in confidence in the heads of these institutions, it cannot carry on its work. It cannot possibly go on with its work unless it can reckon upon the willing and hearty co-operation of these Colleges ; and the only purpose that these forms will serve will be in my opinion to strengthen the hands of heads of institutions and enable them to insist upon the students going through the prescribed course of studies. The College authorities all provide for a systematic course of lectures, and are ever able and willing to go through their work, and do go through that work most diligently and assiduously ; if there is any evasion on the part of anybody it is on the part of unwilling students, and it is they who require to be controlled by the heads of the Colleges who are at

present unable to exercise this control. If there is any such elaborate form of certificate insisted upon, the Principal may at once tell the students "unless you go through the regular course of lectures, you cannot by any importunity induce us to grant you the requisite certificate, because it is not a mere vague statement but one which requires us to enter into a definite and distinct statement as to your studies." In this way these forms will, I venture to think, strengthen the hands of the authorities of all affiliated institutions and make these unwilling students attend to the rules of their Colleges and submit to their discipline. If then my learned friend takes the matter into consideration, it will be for him to say whether, after the objection which he raised as to the dubiousness of the "note (1)" is removed by the omission of the note, he would still desire to have his amendment put to the vote."

Mr. A. M. Bose said that he thought it would be possible for the University to have some regulations by means of which the College Principals who attended to these certificates could be required to give the necessary data; that is to say, if the University could suggest any means, in the note, by which in the case of a Transfer Certificate from one College to another, the College transferring could indicate to the College which receives the student, the number of lectures which he has attended. This was the only way in which the difficulty could be grappled with. He thought that the Syndicate ought to be able to place before the Senate some better means of attaining this end.

The Vice-Chancellor said that the last speaker's remarks implied that the amendment should go to the vote.

Mr. A. M. Bose's amendment was put to the vote, and there were 9 in favour and 9 against it. On a second shew of hands there were 9 in favor and 10 against the amendment, which was accordingly declared lost.

The Vice-Chancellor then put to the vote the first amendment which was moved to the following effect: that for the word "College" the words "College or Colleges attended during two years" be substituted.

This was carried by 13 for and 2 against.

The substantive motion (Note (1) of the B.A. Form being left out by consent) was then put to the vote and carried.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 11.

THE 19TH JANUARY, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D.L.,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C.I.E.
CHARLES H. TAWNEY, ESQ., C.I.E.
THE HON'BLE SIR ALFRED CROFT, K.C.I.E.
THE HON'BLE MR. JUSTICE AMEER ALI, C.I.E.
BABU MOHINIMOHAN RAY.
J. S. SLATER, ESQ.
THE HON'BLE SIR JOHN EDGAR, K.C.I.E., C.S.I.
E. A. BIRCH ESQ., M.D.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.
BABU ASUTOSH MUKHOPADHYAY, F.R.A.S., F.R.S.E.

263. The under mentioned gentlemen were appointed to look over answer papers of candidates for the ensuing Entrance, F. A. and B. A. examinations :—

ENTRANCE.

ENGLISH.

Rev. A. P. Begg, B.A., *Head Examiner.*
W. Billing, Esq., B.A.
C. F. De la Fosse, Esq., B.A.
Rev. J. Edwards, M.A.
J. N. Farquhar, Esq., B.A.
W. Young, Esq.
G. A. Lorimer, Esq., M.A.
Rev. A. Tomory, M.A.
H. Godfree, Esq.
E. M. Wheeler, Esq., M.A.
Babu Herambachandra Maitra, M.A.
,, Upendranath Maitra, M.A.
,, Debendranath Basu, M.A.
,, Matilal Chatterjee, M.A.
,, Lalitkumar Banerjee, M.A.
,, Jnanranjan Banerjee, M.A.
Zahhadur Rahim Zahid, Esq., M.A.

MATHEMATICS.

W. Booth, Esq., M.A., *Head Examiner.*
A. Thomson, Esq., M.A.
Babu Abinaschandra Basu, M A.
,, Baidyanath Basu, M.A.
,, Narendralal De, M A.
,, Suryyakumar Karfarma, M.A.
,, Rajmohan Sen, M.A.
,, Kalipada Basu, M.A.
,, Kaliprasanna Chattoraj, M.A.
,, Mohinimohan Chaudhuri, M A.
,, Haridas Gargari, M.A.
,, Bipinbihari Gupta, M.A.
,, Kshetramohan Banerjee, M A.
,, Jyotiprasad Chatterjee, M.A.
,, Hemendranath Mitra, M.A.

SANSKRIT AND BENGALI.

Babu Krishnakamal Bhattacharyya, B.L., *Head Examiner.*
,, Kailaschandra Bhattacharyya, M.A.
,, Nakuleswar Banerjee
,, Matilal Bhattacharyya, M A.
,, Kaliprasanna Bhattacharyya, M.A.
,, Janakinath Bhattacharyya, M.A.
,, Narayanchandra Bhattacharyya, M.A.
,, Ramkumar Chakrabarti, M A.
,, Bidhubhushan Goswami, M.A.
,, Saratchandra Gupta, M.A.
,, Ramprasanna Mukerjee.

Pandit Sibnath Sastri, M A,
,, Baradakanta Bidyaratna.
,, Harimohan Bidyabhushan.

HISTORY AND GEOGRAPHY.

H. A. Bamford, Esq. *Head Examiner.*

HISTORY.

Babu Kunjabihari Basu, M.A.
,, Isanchandra Ghosh, M.A.
,, Ambikacharan Mitra, M.A.
,, Binayendranath Sen, M.A.
,, Sibchandra Gui, M.A.
,, Adharchandra Mukerjee, M.A.
,, Girischandra Nag, M A.
Abdul Hak Abid, Esq., B A.

GEOGRAPHY.

G. C. Bose, Esq., M.A.
Babu Gobindachandra Das, M.A.
,, Ramendrasundar Tribedi, M.A.
,, Jnanchandra Ghosh M A.
,, Brajaballabh Datta, M.A.
,, Kumudinikanta Banerjee, M.A.
,, Jibanchandra Mukerjee, M.A.
,, Dhanballabh Set, M.A.

Greek ... ... C. H. Tawney, Esq., M.A., C.I.E.
Latin ... ... M. A. Stein, Esq., Ph. D.

French	...	...	...	Rev. Fr. V. deCampigneulles, S J.
Hebrew	...	...	...	E. M. D. Cohen, Esq.
Persian	...	...	...	Shamsul Ulama Shaikh Mahmud Gilani.
Arabic	..	.	.	Col. H. S. Jarrett.
Urdu	..	...	...	Maulavi Shamsul Huda, M A
Hindi	...	...	...	Babu Kanhailal Sastri.
Uriya	...	...	..	Babu Ramprasanna Mukerjee.
Burmese	...	..	...	A. W. Lonsdale, Esq.
Pali	...	...	.	J. Gray Esq.
Armenian	..	...	...	T. Stephen, Esq.
Assamese	.	...	...	Rai Gunabhiram Baruya, Bahadur.
Khasia	...	...	.	Rev. J. Roberts.
Parbatia	...	...	...	Babu Kedarnath Chatterjee.
Mahrathi	...	...	...	Mahadeo Yeshwant Dole, Esq.
Tamil	..	...	...	R. Dhanasukati, Esq.
Telugu	..	...	.	C. Narayan Swamy, Esq
Gujrathi	..	..	...	D. D. Mehta, Esq.
Drawing	...	...	...	W. H. Jobbins. Esq.

F. A.

ENGLISH.

N. L. Hallward, Esq, M.A.
H. R. James, Esq., M.A.
T. W. Arnold, Esq., M.A.
W. B Livingstone, Esq.
Babu Asutosh Mukerjee, M.A., B.L.
Abdur Rahim, Esq.

MATHEMATICS.

J. H. Gilliland, Esq., M.A.
G. W. Küchler, Esq., M.A.
C. Little, Esq., M.A.
W E. K. Shore, Esq., B.A.
Babu Gaurisankar De, M.A.
,, Mahendranath Ray, M.A.

SANSKRIT.

Babu Nilmani Mukerjee, M A.
,, Kailaschandra Datta, M.A.
,, Bireswar Chatterjee, M A.
,, Haridas Sastri, M.A.
,, Nrisinhachandra Mukerjee, M.A
,, Umacharan Banerjee, M.A.
,, Ramprasanna Mukerjee.

Bengali	...	.	..	Babu Saradacharan Mitra, M.A., B.L
Arabic	...	...	..	Col. H. S. Jarrett.
Persian	...	...	..	Shamsul-Ulama Maulavi Ahmad.
Latin	...	...	...	M. A. Stein, Esq., Ph. D.
Greek	...	...	...	C. H. Tawney, Esq., M.A., C. I E.
French	...	...	...	Rev. Fr. V. deCampigneulles, S. J.
Pali	...	...	..	J. Gray, Esq.
Armenian	...	...	..	T Stephen, Esq.
Botany	...	..	.	Dr. D. Prain.
Physics	...	...	.	A. Ewbank, Esq., M.A. A. Macdonell, Esq., M.A. The Very Rev. Fr. E. Lafont, S.J., C.I.E.
Chemistry	...	..	...	A. Pedler, Esq., F.C.S. W. McMillan, Esq, F.C. Dr. P. C. Roy.

History	A. F. R. Hoernle, Esq., Ph. D. N. N. Ghose, Esq. Babu Kalisankar Sukul, M.A.
Logic	Babu Nilkantha Majumdar, M.A. ,, Brajendranath Sil, M.A. ,, Syamacharan Ganguli, B.A.

B. A.

English	F. J. Rowe, Esq., M. A., A. C. Edwards, Esq., M.A., H. M. Percival, Esq., M.A., C. R. Wilson, Esq., M.A.
Philosophy	Rev. H Whitehead, M.A., A. Venis, Esq., M.A., Babu Kalicharan Banerjee, M.A., P K. Ray, Esq., D.Sc., H. Stephen, Esq., M.A.
Mathematics	W. Griffiths, Esq., M.A. Babu Asutosh Mukhopadhyay, F.R.A.S., F.R.S.E.
Sanskrit	Babu Haraprasad Sastri, M.A. ,, Rajendrachandra Sastri, M.A. ,, Ramprasanna Mukerji
Arabic	Col. H. S. Jarrett.
Persian	Maulavi Abul Khair Mahammad Siddiq, M A., Shamsul-Ulama Maulavi Ahmad.
Physics	P. Bruhl. Esq.
Chemistry	Rai Taraprasanna Ray, Bahadur, F C.S.
Latin	F. J. Rowe, Esq., M.A.
Greek	C H. Tawney, Esq, C.I.E.
French	Miss Adams.
History	J. H. Stone, Esq., M.A.

264. The undermentioned gentlemen were appointed to set and examine papers for the Medical examinations of 1892 :—

Medicine	Dr. J. F. P. McConnell.
Surgery	Dr. D. O'C. Raye.
Anatomy	Dr. K. McLeod.
Pathology	Dr D. D. Cunningham
Chemistry	Rai Taraprasanna Ray, Bahadur.
Materia Medica	Dr. E H. Brown.
Midwifery	Dr. Coulter.
Medical Jurisprudence	Dr. S. C. Mackenzie.
Hygiene	Dr. W. J. Simpson
Botany	D. Prain, Esq., F.R.S.E.
Physiology	J. R. Adie, Esq.
Comparative Anatomy	Dr. J. H. Tull Walsh.

265. The undermentioned gentlemen were appointed to set and examine papers for the examinations in Engineering :—

Mathematics ...	J. H. Gilliland, Esq., M. A.
Science ...	A. Pedler, Esq., F. C. S.

Engineering	... Major H. D. Love. W. B. Gwyther, Esq. D. B. Horn, Esq.
Drawing	... Col. A D. McArthur.
Designs &c.	... J. S. Slater, Esq B. Heaton, Esq.

266. Read a letter from the Deputy Secretary and Treasurer, Bank of Bengal, forwording a memorandum from the Personal Assistant to the Vice-Chairman of the Corporation declining to accept the letter of authority granted by the Registrar to the Bank of Bengal for the encashment of the Municipal Debentures, as it is not signed by the University authorities.

RESOLVED—

That in the opinnion of the Syndicate the Registrar is authorised by Bye-Law No. 3 relating to the Registrar to sign documents on behalf of the University, and that the Registrar be directed to return the letter of authority with the University seal affixed to it, and a copy of the Bye-Law above referred to.

267. Read a letter from the Rector, St. Paul's School, Darjeeling, requesting that Darjeeling may be appointed a centre for holding the B. A. Examination.

RESOLVED—

That the Syndicate regret that they are unable to make Darjeeling a centre for holding the B. A. Examination.

268. The Registrar enquired whether a student who had not attended 66 per cent. of the lectures in History or Logic could be admitted to the F. A. Examination, provided he did not take the paper in the subject in which he had not attended the full course of lectures (see Minutes for 1890-91, p. 173)

RESOLVED—

That as para. 7 of the F. A. Regulations requires every candidate to be examined in all the subjects prescribed for the examination, a candidate must attend 66 per cent. of the lectures in all the subjects in order to be eligible for admission to the examination.

269. Read an endorsement by Babu Asutosh Mukhopadhyay forwarding a letter form Hemnath Sen, a student of the Presidency College, requesting that he may be ad-

mitted to the F. A. Examination although he has attended less than 66 per cent. of the lectures in English.

RESOLVED—

That the Syndicate regret that they are unable to grant the request.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES OF THE SENATE

FOR THE YEAR 1891-92.

No. 6.

THE 23RD JANUARY, 1892.

Present:

HIS EXCELLENCY THE CHANCELLOR, *in the Chair.*

THE HON'BLE THE VICE-CHANCELLOR.
THE HON'BLE THE LIEUTENANT-GOVERNOR OF BENGAL.
THE HON'BLE THE CHIEF JUSTICE OF BENGAL.
THE HON'BLE SIR ALEXANDER MILLER, KT., Q. C.
THE HON'BLE COLONEL R. C B. PEMBERTON, R E.
NAWAB ABDOOL LUTEEF, BAHADUR, C.I.E
CHARLES H. TAWNEY, ESQ., M.A., C.I.E.
THE HON'BLE MAHENDRALAL SIRCAR, M.D., C.I E
RAI KANAILAL DE, BAHADUR, F.C.S., C.I.E
THE HON'BLE SIR ALFRED CROFT, M.A., K C.I.E.
COL. H. S. JARRETT.
G. KING, ESQ., M B., LL.D., F.L.S., F R S., C.I.E.
MAHARAJA DURGACHARAN LAW, C.I.E.
K. MCLEOD, ESQ., M.A., M.D., F.R.C.S.
BABU KRISHNAKAMAL BHATTACHARYYA, B L.
BABU OMESCHUNDER DUTT.
THE HON'BLE J. O'KINEALY, M. A. LL. D., C. S.
MAHARAJA SIR JOTINDRAMOHAN TAGORE, BAHADUR, K C.S.I.
THE HON'BLE AMEER ALI, M.A., B L., C.I E
NAWAB ASGHAR ALI, KHAN BAHADUR, DILER JUNG, C.S.I
MAHAMAHOPADHYAY MAHESACHANDRA NYAYARATNA, C I.E.
THE VERY REV. FATHER E. LAFONT, S J., C.I.E.
A M. BOSE ESQ , M.A.
BABU KALICHARAN BANERJEE, M A , B.L.
BABU MOHINIMOHAN RAY.
C. J LYALL, ESQ., B.A., C.S., C.S.I.
A. PEDLER, ESQ., F.C.S.
A F. RUDOLF HOERNLE, ESQ., M A, Ph. D.
BABU TRAILOKYANATH MITRA, M.A , D L.
W. GRIFFITHS, ESQ , M.A.
F. J. ROWE, ESQ., M.A.
THE HON'BLE RASBIHARI GHOSH, M A , D.L.
BABU SURYYAKUMAR SARBADHIKARI.
A M. NASH, ESQ., M. A.
BABU KRISHNABIHARI SEN, M. A.
REV. K. S MACDONALD, M A., D D.
BABU HEMCHANDRA BANERJEE, B.L.
MAULAVI MUHAMMAD YOUSUFF, KHAN BAHADUR, B.L
J. S SLATER, ESQ.
BABU RADHIKPRASAD MOOKERJEE, C.E., A.M.I.C.E.
RAI LALMADHAB MOOKERJEE, BAHADUR, L M.S.
D O'C RAYE, ESQ , M.D., F R.C.S
E. A. BIRCH, ESQ., M. D.
MAULAVI ZAHIRUDDIN AHMED, L.M.S.

NAWAB SYUD AMEER HOSSEIN, KHAN BAHADUR, C.I E.
THE HON'BLE SIR HENRY HARRISON, KT., B.A., C.S.
BABU GAURISANKAR DE, M.A., B.L.
MAULAVI SURAJUL ISLAM, KHAN BAHADUR. B. L.
RAJA PIYARIMOHAN MOOKERJEE, M.A., B.L., C.S.I.
THE HON'BLE SIR JOHN EDGAR, K.C.I.E., C.S.I.
BABU DEBENDRANATH RAY, L.M.S.
RAI RAJKUMAR SARBADHIKARI, BAHADUR, B.L.
THE HON'BLE RAJA UDAY PRATAB SINGH.
THE HON'BLE CHUNDER MADHUB GHOSE.
MAULAVI ABDUL JUBBER, KHAN BAHADUR.
COL. J. M MCNEILE, R. E.
RAI KSHETRANATH CHATTERJEE, BAHADUR, M.I.C.E.
W. BOOTH, ESQ., M.A.
H. M. PERCIVAL, ESQ, M.A.
RAI BANKIMCHANDRA CHATTERJEE, BAHADUR, B.L.
BABU ISANCHANDRA BASU, M.A., B.L.
BABU BHOLANATH PAL, M.A.
BABU NILMANI MOOKERJEE, M.A., B.L.
BABU SARADACHARAN MITRA, M.A, B.L.
NAWAB MEER MUHAMMAD ALI.
C. J. H. WARDEN, ESQ, M.D.
BABU GOLAPCHANDRA SARKAR, M.A., B.L.
BABU JOGINDRACHANDRA GHOSH.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.,
THE MOST REV. PAUL GOETHALS, D D, S J.
BABU BRAHMAMOHAN MALLIK.
NAGENDRANATH GHOSH, ESQ.
A. F. ABDUR RAHMAN, ESQ.
BABU CHANDRANATH BASU, M.A., B.L.
J. WOOD-MASON, ESQ.
A. CROMBIE, ESQ., M.D.
J. H. GILLILAND, ESQ., M.A.
BABU DURGAMOHAN DAS.
BABU HARAPRASAD SASTRI, M. A.
SHAMS-UL-ULAMA MAULAVI AHMAD.
BABU UMESCHANDRA DATTA, B. A.
W. KING, ESQ., B.A., D.SC., F.G.S.
C. E. BUCKLAND, ESQ., B.A., C.S.
SHAMS-UL-ULAMA SHAIK MAHMUD Gilani.
J. H. APJOHN, ESQ., M.A., M.I C.E.
BABU PRATAPCHANDRA MAJUMDAR.
C. LITTLE, ESQ., M.A.
J. C. BOSE, ESQ., B A., B.SC.
BABU SRINATH DAS.
BABU ASUTOSH MUKHOPADHYAY, M.A., F.R.A.S., F.R.S.E.
REV. H. WHITEHEAD, M.A.
MAHARAJA SIR NARENDRAKRISHNA, BAHADUR, K.C.I E.
BABU SYAMACHARAN GANGULI B.A.
BABU BIPINBIHARI GUPTA, M.A.
H. H. RISLEY, ESQ., B.A., C.I.E.
J. F. P. MCCONNELL, ESQ.. M.D.
RAI GUNABHIRAM BARUYA, BAHADUR.
BABU JOGINDRACHANDRA GHOSH, M.A., B.L.
BABU MAHENDRANATH RAY, M.A., B L.
PRINCE JAHAN KADR MIRZA MUHAMMAD WAHID ALI, BAHADUR.
REV. A. P. BEGG, B. A.
BABU KAILASCHANDRA BASU L.M.S.
BABU UPENDRANATH MITRA, M. A., B.L.
BABU PRANNATH PANDIT, M.A., B.L.

270. The Senate was convened for the purpose of conferring degrees.

The Vice-Chancellor having declared the Convocation opened, the Graduates of the year were admitted to their respective degrees in the usual manner.

His Excellency the Chancellor in calling upon the Vice-Chancellor to address the Convocation, said :—

Mr. Vice-Chancellor, your Honour, Ladies and Gentlemen,—The annual Convocation of the University affords me agreeable oppor-

tunity of meeting you, which I should be sorry to miss, and I must express my pleasure at finding myself once more in this chair. It will not be necessary for me to detain you for more than a very few moments, but there are one or two matters which I cannot leave unnoticed.

You will, I think, expect me, in the first place, to say one word of sympathy and regret in reference to the death of the young Prince who was taken from us last week. The sympathies of this University are naturally with the young, and in this case you will certainly not be indifferent to the fate of one who, in the very prime of his youth, and with a bright and splendid career before him, has been cut off so suddenly and under such melancholy circumstances. I am sure that you will share the sorrow of his parents, and that you will not forget that his Royal Highness the Prince of Wales took an interest in this University, which in 1876 conferred upon him the honorary degree of a Doctor in Law. I was glad to see, Mr. Vice-Chancellor, that the Senate at a recent meeting so appropriately took notice of this sad occurrence.

I have to congratulate the Members of the University upon the fact that the Honourable Dr. Gooroo Dass Banerjee has been good enough to accept re-appointment as Vice-Chancellor. (Applause.) He has during the past two years discharged the duties of his office with tact and judgment, and in a manner which has secured for him the confidence of the University. (Applause.) We are, I think, extremely fortunate in having prevailed upon him to accept re-appointment.

Mr. Vice-Chancellor, I have to thank the graduates of the University, whom I have for the third time asked to aid me in the selection of the Fellows who will be appointed to fill up vacancies on the list, for the assistance they have given me. They have exercised their choice in a manner which has met with general approval. The two gentlemen whose names they have submitted to me, Babu Pran Nath Pundit and Babu Upendra Nath Mitra, are both of them men of eminence in their profession (applause), and have a record of literary and academical achievement which clearly points to their fitness for the honour which has been done them. (Applause.) Both of them, curiously enough, have been elected Tagore Law Professors at different times. Babu Pran Nath Pundit is a well-known Sanskrit scholar. Babu Upendra Nath Mitra was gold medallisteof his year, and was for several years Law Lecturer in the Governmgnt College of Dacca, and has written a standard work upon a legal subject.

I may say in passin tha t I was gratified to find that you were able, in accordance with thesuggestion which I ventured to make to you last year, to discover means by which graduates in the mofussil have been permitted to take part in the election of these gentlemen. I understand that out of 900 persons qualified to vote, 641 exercised the privilege conferred upon them ; a sign that this particular franchise has a higher value set upon it by those who possess it than certain other franchises which I could mention.

The result of the experiment has been so successful that I am certainly not disposed to abandon it. But it may be said, "if the experiment has succeeded so well, why not go further? Why not make the arrangement a permanent one, and give it a statutory isancton?" We all know of course that recommendations have

been submitted to the Government of India by the Senate of the University for a revision of the Act of Incorporation, and I think I am right in saying that the principal change recommended was a proposal that one-half of the total number of Fellows annually appointed should be elected by the graduates. Gentlemen, I have proved by my actions since I have been connected with the University, that there is no difference between myself and those who hold this language as to the propriety of giving the graduates a voice in the selection of the Fellows. University legislation is, however, a very serious matter, and not to be undertaken without a good deal of thought and deliberation. In this particular instance you are confronted with a special difficulty, that of providing adequately for the representation of the minority, whose claims none of us would desire to ignore. There is also this to be remembered, that changes of the law affecting one University to a certain extent involve the adoption of similar changes in regard to the others. In regard, however, to this question of the election of Fellows, experience has fortunately shown us that it is possible to give a voice to the graduates in their selection without modifying the Act, and its revision may, for this reason, be regarded as less immediately urgent than it might otherwise have been. The same question has, as you are aware, been under consideration in reference to the Bombay University which, like yours, has a body of graduates representing a variety of different elements. The difficulty of devising a system of election which should secure to each of these elements a suitable amount of representation would be very great, and the University of Bombay is, I understand, prepared, at your suggestion, to follow the example set here, and to proceed experimentally upon the lines which we have adopted. You may be quite sure that, even if we do not at this moment see our way to legislate in reference to this point just now, the privilege which I have been able to confer upon the graduates is not likely to be restricted. The sound judgment which they have shown in exercising that privilege renders me indeed disposed to extend its scope, and I will gladly consider whether this cannot be done before the time comes when I shall again meet you in this building. Applause.)

These are the only matters of University business, strictly speaking, which I wish to refer to; but as you allow me to take advantage of these occasions in order to mention to you any questions affecting the University in which I am specially interested, I should like this afternoon to refer for a moment to such a question.

I have noticed with much pleasure, and I desire to commend to all the friends and supporters of the University, the movement which has lately been set on foot by the society known as that for the higher training of young men in Calcutta. I feel no doubt that there is room for such a movement, and that much good may be done by it. What are the facts? This University is, as we all know, an examining University. Our students have to satisfy us that they have attended lectures at one of the affiliated institutions, and they are required to pass an examination which shall prove that their studies have provided them with a certain amount of knowledge, and we thereupon bestow upon them an aca-

demical title. This is, I am afraid, the beginning and the end of our connection with them. We do not attempt to take charge of them in any sense during the time which they spend in preparing for their degree ; we are not responsible for their health, for their surroundings, and we do not seek to exercise any supervision over their private life. In some of the affiliated institutions no doubt some attempt may be made in this direction, but this affects only a very small minority of the students. The great bulk of them are, save for the fact that they attend the classes of a school or college during a few hours of the day, absolutely uncared for.

The result is that we have some six or seven thousand young men between the ages of 17 and 29 turned loose in this wilderness of a city, exposed to its temptations and dangers without any precautions to ensure that their lives shall be healthy, or happy, or respectable. The picture is one which it is impossible to contemplate without the deepest misgivings. The position of the lads who come here from the mofussil must, at all events when they first arrive here, be one of the greatest isolation. They are, perhaps, separated by hundreds of miles from their friends and relations, and Heaven knows what sort of friends and what sort of connections they will form here if they are left to their own devices. No contrast could be sharper than that between the condition of the young men who take their degree in the Calcutta University and that of the students of one of our old English Universities. In the latter case you have the college with all its comforts and resources, its social life. its strict discipline and supervision ; you have the intercourse of student with student, the *esprit de corps* which makes a young man proud of his college, the intimacy of teacher and pupil, and the influence of the former over the latter ; the pleasant associations of the cricket fields and the river—all these build up a life, which has its social and domestic side amidst the healthiest of moral and material surroundings. All these conditions are absent here. A young man coming to Calcutta from a distant town is a mere drop in this great sea, uncared for, exposed to every temptation and every discomfort, unknown perhaps to his fellow students—perhaps even to his teachers. Can we be surprised if many of them do not pass through the ordeal without the worst results alike to body and mind ?

This, gentlemen, is, I understand, the state of things which the association, of which I have spoken, desires to improve. Let us be under no illusions as to the difficulty of the task I hope it will not be supposed for a moment that, when I referred just now to the old English Universities, I believed that it was possible to reproduce them, or anything like them, in this country. I mentioned them rather with the object of suggesting that a student at Oxford or Cambridge would not have a much better chance of escaping the dangers which beset our young men here if he was exposed to them to the same extent.

I believe, however, that, without aiming at too high an ideal, it is within our power to do some thing to mitigate the evil, and I must express the pleasure with which I read the address recently delivered by Mr. Risley upon the subject of this movement. understand that, in the opinion of the society there are three direc-

tions in which some thing may be done. The work is, I am informed, to be divided into three sections—the Literary section, the Athletic section, and the General section. The Literary section will be concerned with books which the students may be expected to read outside of their regular school or college work. The Athletic section proposes to encourage those healthy games and outdoor exercises which play so large a part in the education of English youth, while the General section has for its object the exercise of a useful influence over the conduct and character of the young men. It would be impossible within the limits of the observations which I am now offering to you to consider the possibilities which lie before us in these different directions. I can sum up all that I will venture to say this evening in a very few words.

In regard to reading, I see no difficulty in adopting the suggestion that a list of books should be prepared and recommended to our young friends for their reading—a list which would put them in the way of reading books quite as interesting as, and very much better for them than, the mischievous trash of which I believe many of them are copious consumers. Such a list, to be added to from time to time, could probably be prepared without very much trouble. If, however, this movement is to come to anything, I should like to look forward to the time when it will be possible to provide our students, not only with a list of books, but with the books themselves, and with convenient rooms in which to read them. A Library—perhaps a lending Library—with reading and recreation rooms attached, would, it seems to me, be a very admirable adjunct to the University. I say this without casting any reflection upon the existing University Library, which is intended mainly for the use of resident Fellows. I know that, under the regulations, persons who are not Fellows may obtain special permission to use that Library, and even to borrow books from it, for purposes of literary research, but I doubt whether it could ever be made available as a popular Library for the bulk of the students.

As to the pursuit of athletic exercises, I do not believe that any amount of gymnastics will make up for the absence of such games as cricket and football. I cannot resist quoting Mr. Risley's dictum when he said that "the memory of the pious founder who endowed the schools of Calcutta with a suitable playground will be held in everlasting remembrance when many more serious matters have been forgotten." I should like to look forward to the time when suitable grounds of this kind will be provided for the use of our University students.

Of the work of the general section, it has been said with truth that the endeavour to form the character, and to guide the moral conduct, of our young men is one of immense difficulty. I believe you can inculcate morality by precept and example, but I have not much faith in precept alone. Our schools, again, are, as a rule, day schools, and home influences, upon which so much depends, are, I suspect much less strong here than they are in Europe. I have, however, an almost unlimited belief in the results which can be produced upon the young by the personal influence of individuals, and I believe that it is within the bounds of possibility that men might be found in this country capable of exercising such an influence over our students and of exercising it with very far-reaching and very salutary

results. If we could find here even one or two men animated by the same unselfish desire to do good and to spread the knowledge of the truth, as the late Mr. Arnold Toynbee, whose name may be familiar to some of you, the difficulty would, I believe, disappear. We should, however, require not only the men but some kind of an organization for them to work under, and my thoughts recur to a movement in which I took some part before I left England – I mean that for the extension of University teaching instituted not many years ago by Mr. Goschen and a few other persons connected with the great Universities. The object of different movements was the establishment of different centres at which courses of lectures might be given by men carefully selected from amongst the most promising members of the University in subjects especially interesting to the residents of the localities selected. The movement has been very successful, and there is hardly any subject upon which lectures have not been given, and they have been very largely attended and have, I believe, served to awaken a new interest in many objects of study hitherto completely neglected, except in the great centres of education. Is it beyond the bounds of possibility that teaching of this kind might be undertaken in Calcutta, not necessarily in subjects bearing directly upon the University examinations, but upon such subjects as history, literature, and those social, ethical and economical questions in which we, all of us, take an interest?

But, gentlemen, even if we are to assume that we have got the men and established the organization, it would be absolutely necessary, if the experiment is to be tried with any degree of success, that there should be some suitable place at which students and teachers should come together, and for this reason I should like to see the Association, of which I am speaking, provided with a head-quarters of its own in a central position. Its principal features would be a Library, with one or two lecture and reading rooms attached, and if this building stood by the side of a suitable recreation ground, our institution would become complete. All this may be unpractical and unattainable, and there may possibly be difficulties in the way which I have not foreseen. The idea seems, however, to be one worth discussion, and I believe that, if it were to be thoroughly matured, you would find many persons ready to give it their encouragement and their practical support. I, for one, shall be very glad indeed to do so. (Applauses.)

And now, Mr. Vice-Chancellor, it only remains for me to congratulate the young men upon whom degrees have been conferred this afternoon, and to express my cordial hope that for them, and for the University, of which they are members, the new academical year may bring nothing but good. (Applause.)

The Vice-Chancellor then addressed the Convocation as follows:—

Your Excellency, Ladies and Gentlemen,—Having had the honour of addressing the Convocation on two previous occasions, I wished very much this time to be a listener and not a speaker; but though that was my wish, a wish that was a command unto me, has assigned to me the present situation, and I must do my best to fulfil its obligations, after thanking his Excellency for the kind words he has been pleased to say of me, and thanking you for the evident marks of kindness to me, with which you have listened to those words.

Following the practice of former years, I shall venture to occupy for a few moments your time, if not also your attention, with a brief retrospect of our past academic session; I shall then touch upon some of the important educational problems that are exercising the public mind; and I shall conclude with the usual words of congratulation and advice to those who have just obtained their degrees.

The doubt I have expressed as to my being able to engage your attention, implies no mistrust in your patience, wearied as yon must have been with the protracted and monotonous ceremony you have been witnessing; it only indicates mistrust in my own power of arresting attention, and some mistrust also in the attractiveness of my subject. For amidst events of deep and mournful interest around, the incidents of the academic year under review were scarcely of a stirring character. But such as they were, they have been enough to keep us engaged; they occupied their due share of public attention; and they evoked criticisms, often severe, but always instructive.

The number of candidates for our examinations in the past year was, I observe, less than the number in the year preceding. One cause of this is, I think, to be found in our own statistics. The successful candidates at the Entrance and F. A. examinations of 1889, who would in due course form respectively the majority of the candidates for the F. A. and B. A. examinations of 1891, were comparatively small in number, the year 1889 having been, as you will remember, a year of heavy failures; and the year 1890, which was one of fair average results, did not leave any unusually large residue of unsuccessful candidates to make up the deficiency.

Another circumstance which may also partly account for this decrease, was the exercise of greater care and discrimination by the heads of institutions in sending up candidates for examination. So far as the falling off is due to this cause, it need not create much misgiving; especially when our schools and colleges, which are the real source of our strength, are steadily increasing in number.

The question whether the growth of our educational institutions has not reached a point after which their further growth requires to be regulated and restrained, came up before the Senate last year, and is still under consideration.

Some are of opinion that new schools and colleges should be recognised and affiliated irrespective of their effect on older institutions, and then free competition would lead to the survival of the fittest; while others maintain that if rival institutions opened for purposes of gain, but not required to satisfy any real want, are allowed to exist, they lead to unhealthy competition, injurious to the interests of discipline and sound education. There is some force in the argument on each side.

Remembering that it is only a small fraction of the vast population of the country that shares the benefits of education, we must not too rigidly adhere to the principle that demand should precede supply, but should sometimes allow supply to anticipate and create demand as it not unfrequently does. But on the other hand, it must be borne in mind that as in nine cases out of ten the customer here is not likely to be a competent judge of the commodity, free competition requires control to secure efficiency and usefulness.

The subject involves conflicting considerations of some nicety, and much will always depend upon the good sense and discrimination of the controlling authority. We may hope that the question will be considered by the Senate in all its bearings, and a satisfactory solution will soon be arrived at.

The Regulations relating to the examinations in the several Faculties have undergone revision more or less during the past year.

The changes in the Arts Regulations relate to matters of detail and not of principle, and so I shall not detain you with any notice of them.

The scheme of Law Studies has been carefully revised by a Committee consisting of a learned Judge of the High Court who is the President of the Faculty of Law, and of the Advocate-General, the Senior Government Pleader, one of the leading Attorneys, and two experienced Professors of Law representing the affiliated Law Colleges. A scheme thus prepared may well be accepted as including all that it is necessary to equip the young lawyer with, to qualify him for the responsible duties of his profession ; and the B.L. degree will, I hope, continue to enjoy and deserve the recognition it has hitherto had, as a test of fitness for entering the profession or the judicial service.

In the Regulations in Medicine, an important change has been introduced requiring unsuccessful candidates to go through a fresh course of instruction in the subjects in which they are found deficient, before they are admitted to examination again. The rule is intended to secure that standard of proficiency which is necessary to be attained by those who must be entrusted with life and health.

The Regulations in Engineering have been referred for revision to the Faculty of Engineering, along with a letter from the Director of Public Instruction and a Resolution of the Government of Bengal recommending certain changes. One of these recommendations is to introduce an alternative course for Mining Engineers. The somewhat better prospects held out to graduates in Engineering in the Government Resolution just referred to, may, I hope, make our degrees in Engineering more attractive than they have hitherto been.

The privilege granted last year to the M.A.'s and holders of corresponding degrees in the other Faculties to elect two gentlemen from among themselves for appointment as Fellows, was again allowed by His Excellency the Chancellor to be exercised this year, and electors resident in the mofussil were invited to take part in the election by signing their voting papers in the presence of a Magistrate. How greatly the privilege is valued is shown by the fact that out of about 900 Masters and Doctors whose names are on our rolls, no less than 641 took part in the election, and voting papers came from the most distant parts of the Empire. The voting resulted in the election of two well-known gentlemen, Babu Pran Nath Pandit and Babu Upendra Nath Mitra, and I am glad to say that their election has met with the approval of His Excellency. To these and the other gentlemen who have been just appointed Fellows, I accord a most hearty welcome.

The result of the last election is a source of gratification to me, not only because it gives me a second time the pleasing occasion for congratulating my fellow-graduates on their success, but also

because it gives us just ground for entertaining the hope that under the guidance of the enlightened Statesman whose liberal mind devised the experiment, what was commenced as an experimental measure may at least become part of the recognised customary constitution of the University.

Whilst welcoming our new colleagues, I must not forget to pay the customary tribute of respect that is due to those whom we have lost during the past year. To some of them that tribute is due as a matter of something more than mere conventional formality.

Mr. Downing was a member of the Faculty of Engineering and materially helped the Faculty in its deliberations on all important questions. As the head of the Seebpore Engineering College, the only institution of its kind in Bengal, he had an active share in the training of our young men in a profession the importance of which is being realised more and more every day. At a time when the scheme of education in Engineering is about to undergo important alterations, the loss occasioned by his death must be greatly felt.

In Raja Rajendralala Mitra the University has lost one of its most distinguished members, and the learned world a scholar of rare attainments. His reputation was not confined to his own country, but his many and erudite works made his name well known wherever Oriental scholarship is prized and respected. In recognition of his profound learning the University conferred on him the Honorary Degree of Doctor in Law, and by honouring him has honoured itself. He took a leading part in the proceedings of the University, he always maintained his point with impressive eloquence and indomitable courage, and his weighty words of wit and wisdom will long be remembered in this hall.

Pandit Iswar Chandra Vidyasagar was a Fellow of this University ever since its establishment in 1857. During its early days he took an active interest in its progress; and though latterly, having in effect retired from public life, he ceased to attend our meetings, he has done the University and the cause of education lasting service by establishing the first affiliated private college under native management, which has served as a model for many others that have since come into existence. He was a great friend of female education, and a staunch advocate of woman's rights; and for the solid work he has done as an educationist, as a social reformer and as a philanthropist, his country will ever remain deeply indebted to him. If Rajendralala's was a massive intellect stimulated by an ardent desire for knowledge, Vidyasagar's was a generous heart and a resolute will impelled to action by an over-flowing love for humanity. The lives of these two eminent men as representing two great types of character, are worthy of careful study by those who long for intellectual and moral greatness.

In Pandit Adjudhya Nath we have lost another distinguished colleague, a man 'of whom' as the Vice-Chancellor of the Allahabad University has justly remarked, 'any country and any race might be proud.' His numerous professional and other engagements in the North-West left him little time, it is true, to take any active share in our work; but his warm sympathy for our educated young men in all their hopes and aspirations, and his earnest exertions and immense self-sacrifice to promote the good of his country, made him

loved and respected by the educated classes all over India, and Bengal mourns his loss as deeply as his native province.

There is yet another and a very much heavier loss which we have to mourn,—a loss that grieves not this country alone but has plunged in deep sorrow the whole Empire of Britain,—the loss not of a colleague but of a Prince who in the natural order of things would have been our future Ruler, and who had endeared himself so much to the people of this country by his recent visit. While this melancholy event is so fresh in our memory, we cannot take part in a public ceremony like this, without a respectful expression of our profound sorrow for the loss, and of our heart-felt loyal sympathy for our beloved Sovereign, to whose beneficent rule we owe the blessing of that liberal education which this University has been established to promote.

I shall now, as I proposed at the outset, touch upon one or two of the educational problems that pressingly demand solution.

It is said, not without some truth, that the University is turning out graduates and under-graduates in much larger numbers than can find suitable employment, and that whilst the education that it encourages is so ill-remunerative, the cost of time and energy that preparation for its examinations demands is disproportionately high. The question therefore presses upon us, how to regulate our courses of study so as to ensure the greatest usefulness and occasion the least loss of time and energy to the student.

As regards the courses of study prescribed for examinations in the special Faculties of Law and Medicine, it is not easy to see what useful change the University can introduce. These courses have been settled by distinguished members of the respective professions with due regard to their usefulness for the careers for which they are intended to train our graduates ; and considering the grave responsibilities to be undertaken, they cannot be said to be too exacting in their demand upon the time and attention of the student. If skilled labour in these professions does not find sufficient work or adequate remuneration, the law of supply and demand must be left to bring about the necessary economic equilibrium.

The case, however, is somewhat different with regard to our course of study in Engineering. Here it is, I think, possible for the University to introduce changes for the better. Though a well-qualified body of legal or medical practitioners can create no new work for themselves, unless it be by making people over-sensitive about their legal rights or health—a state of things not very desireable in itself—a body of Engineers or persons duly trained in those branches of science and art which will enable them to develope the material resources of the country, can create work for themselves and wealth for others.

But even here the University unaided can do very little. It may prescribe courses of study and institute examinations in Mining Engineering or Agriculture, or other similar subjects ; but unless there are colleges established competent to give a thorough and efficient theoretical and practical training in those subjects, the prescribed courses of study can never be profitably pursued, and the examinations creditably passed.

But how are we to have such a college established ? It must be a long time before private liberality, which is taxed in so many ways,

can be expected to endow an institution of this sort. Though I am extremely reluctant to ask my countrymen to invoke the aid of Government where they can help it, in the present instance I must say we cannot do without such aid. We ought therefore to be deeply thankful to Sir Charles Elliott for the views expressed by him in the Resolution already alluded to, where he says : "He considers that the increase of the number of young men trained to engineering pursuits and qualified by their training to develope the resources of the province, is an object on which he is justified in incurring large outlay, since he is confident that all such outlay will be fully reproductive."

The policy indicated in this Resolution regarding the training of our young men in Engineering and Agriculture will, if fully carried out, as I confidently hope it will be, mark a new era in the educational and the general progress of the country, and the dreams of gold of which we recently heard so much, will be realised though in a somewhat different shape.

In the courses of study prescribed for our Arts examinations I think it is not only desirable, but absolutely necessary, to introduce certain changes, and I am glad to say that the attention of the University has already been drawn in this direction.

Our Entrance examination every year attracts several thousands of candidates, of whom only a small number intend to pursue their studies in Arts any further, the rest being anxious to pass the examination to qualify themselves for some occupation for which an Entrance certificate is considered a necessary or a desirable recommendation. It would therefore be ignoring the case of this large body of candidates if the Entrance course is prescribed only with a view to train students for entering the University. It may no doubt be said that those who do not intend to enter the University need not come up for the Entrance examination. But the passing of this examination implies a certain well recognised educational and even social position, which has made the examination so attractive ; and in the interests of education and progress, we ought to do our best to foster the generous ambition which even the intending cultivator or mechanic feels to be an under-graduate of the University. Considering, however, the great diversity of careers for which the Entrance examination will have to prepare the students, if it is to be organised for such a comprehensive object, the prescribed course of study must consist of a large number of alternative subjects, each being suited for a particular career, but everyone of them ensuring a certain amount of mental training. If such a scheme is judiciously devised, it will qualify our undergraduates not only for literary and scientific careers, but also for industrial and commercial pursuits—a thing that is very much needed, to remove the block caused by overcrowding in their avenues to employment.

The movement recently set on foot to reconcile sea voyages with Hindu orthodoxy may, if it succeeds, stimulate commercial activity and enterprise, and thereby open fresh fields of employment for our educated young men.

I have hitherto been dealing with the question of the usefulness of our University education solely with reference to economic considerations, which no doubt claim precedence over all others. But

though to enable us to supply ourselves with the necessaries of life must be the first object of education, to earn wealth is certainly not its sole nor its chief end. A mind well trained and equipped has always been regarded by its possessor as more valuable than any material wealth. Kepler amidst all his difficulties used to say that he would rather be the author of the works he had written than possess the Duchy of Saxony. But why go to Germany for such examples? In this classic land of ours in its good olden days honourable and contented poverty was the common lot of the learned classes. And it was when our learned classes cared little for material wealth that they were able to lay by those invaluable intellectual treasures which are still the pride of their nation. The mind is the noblest part of our being, and education which improves and enriches the mind so as to make it happy within itself, can never be said to be useless, even if it does not enable one to earn the means of physical comfort and enjoyment.

It should therefore be our aim to encourage such education as not only brings on material prosperity, but also improves and enriches the mind :—education which is not only a means to an ulterior end, but is an end in itself ; so that even if our graduates and under-graduates are unable to make their education a means of earning wealth, they may not have any just ground of complaint that preparation for our examinations has been useless labour. And we should carefully ascertain and remove, so far as we can, every cause that stands in the way of our securing this great object.

Now one of the causes which interferes with our University education having a wholesome disciplinary effect on the mind, is, according to certain competent authorities, the great extent of our courses of study. Teachers and professors in order to get through the work have, we are told, to skim over the surface, and they cannot find time to impress on their pupils those deeper lessons that underlie all literature and science ; while, on the other hand, the majority of students are so completely ground down by the weight of the burden imposed on them, that they find no opportunity of exercising their own powers, and they feel little pleasure in their study.

I would earnestly call the attention of our Boards of Studies to the subject, and I have no doubt that they will do their best to remove the evils complained of. Not that I would allow our standards to be lowered in the slightest degree, but I think that the standard of an examination is really raised not so much by requiring a more extensive but superficial reading as by insisting on a deeper culture and a more thorough appreciation of what is read. Knowledge forced into the mind under high pressure only inflates the mind with conceit, without producing any healthy expansion of ideas ; it strains and enervates instead of exercising and invigorating the mental powers.

But if the great extent of the courses of study prevents instruction from being impressive, and stands in the way of our education producing any lasting effect, the inconvenient and unmanageably large size of the classes in most of our schools and colleges, I fear, leads no less to the same result. It prevents teachers from looking to the individual wants of pupils and from exercising that personal influence upon them which is essential to efficient teaching. Speaking in the presence of so many able and experienced teachers

and professors, I need hardly add that the teacher should not only impart to those seated at his feet the knowledge he possesses, but should also inspire them with the enthusiasm that animates him, should stimulate them with the thirst for knowledge which he feels, that the instruction given might be imbibed with eagerness and delight. He should, to use the expressive language of our ancient traditions, bless them with his own intellectual blessedness.

Another cause which operates prejudicially in a similar way, is the time-serving spirit in which our young men often pursue their study. A pernicious habit, which I am sorry to hear is gaining strength, prevails with the great bulk of our students of reading; not with a view to gain knowledge and improve the mind, but merely with a view to pass examinations. It is high time now that our teachers and professors should exert all their influence resolutely to put down this evil, and should use every opportunity forcibly to point out to their pupils the lamentable folly of wasting their time and energy in learning the petty art of achieving unmerited success at the temporary trials in the examination hall, when they should be improving and strengthening their minds to qualify them for the continued trial in life.

Whilst imputing to our students the blame that justly attaches to them, I must not disclaim our own share of it. Our examinations have, no doubt from a desire to make them thorough and searching, occasionally been such as to require special preparation as distinguished from such general study of the prescribed subjects as a student desirous of gaining knowledge and improving his mind would naturally go through. We have sometimes demanded from our examinees a too minute knowledge of minor details, or knowledge of a sort that is not likely to be necessary or useful anywhere except in the examination hall. As a very eminent and experienced examiner, Professor Huxley, has remarked 'examination like fire, is a good servant, but a bad master.' It should serve as a test for diligent and thoughtful study, instead of making study serve its peculiar requirements.

One great reason why our University education fails to awaken much original thinking, is because it is imparted through the medium of a difficult foreign language, the genius of which is so widely different from that of our own. The acquisition of such a language must to a great extent be the work of imitation; and the habit of imitation gradually becomes so deep-rooted as to influence our intellectual operations generally. Again, the costly foreign drapery in which our students have to clothe their thoughts, taxes their limited mental resources to an extent which does not leave enough for the proper feeding and fostering of thought. The only way out of the difficulty is for the student to economise his means and to forego all desire for finery in language and concentrate his efforts to the cultivation of the thinking faculty; and he may rest assured that noble thoughts never fail to command attention, though clad in plain and homely garb

Perhaps the most potent of all the reasons why our education often fails to improve and invigorate the mind, and why the promises of youth are in many cases so little fulfilled in later years, is our deplorable neglect of physical education. If we had left our young men alone, our responsibility for this neglect might not have been equally great. But as it is, we impose upon them heavy intellectual

work, and by means of our degrees and other marks of distinction supply a powerful stimulus for such work; and yet we take no care to strengthen the body to enable it to bear the strain. The result is that so long as the stimulus acts, our young men work hard, and thereby exhaust their unreplenished powers; and when the stimulus is gone, their capacity for work is permanently impaired. Any attempt to improve the mind without invigorating the vital energy would be like an attempt to increase the efficiency of machinery by mere internal adjustment without supplying adequate motive power.

The University can do very little to remedy the evil, but those who are intrusted with the management of schools and colleges should never forget their responsibility in this matter. They should strongly impress upon their students the indispensable necessity of attending to health, and they should encourage healthful and harmless physical exercise, and supply facilities for it, without, however, introducing any element of compulsion or restraint. One very hopeful sign of progress in this direction is to be found in the fact that the Lieutenant-Governor of the Province is taking a kindly personal interest in the physical well-being of our students; and I take this opportunity of sincerely thanking his Honour for the encouragement they have been receiving from him. And may I here appeal to Government and private liberality to acquire for us some suitable play-ground near the Senate House where our undergraduates may resort, so that side by side with the seat of those trials that so severely tax the mind, there may be a place for refreshing recreation to strengthen the body, and the University may be associated not only with distressing thoughts of impending examinations, but also with joyous recollections of youthful pastime and innocent pleasure?

There is one other educational topic upon which I have a word to say. A good deal of adverse criticism, sometimes proceeding from high authorities, is levelled against the fluctuating percentage of failures at our examinations, which no doubt ranges between widely divergent limits. The fact commented upon certainly requires examination, and I must thank our critics for drawing attention pointedly to it. If it is due to any variation in our standard, the result is clearly unfair to the examinees. But it may be due to other causes besides, as a little consideration will show. Ordinarily no doubt, one year is just as good as another, and the percentage of good candidates would not vary greatly from year to year. But owing to some change in the teaching staff of a large college, or owing to an epidemic such as influenza (causes which are not altogether imaginary, but have sometimes been in actual operation) the percentage of ill-prepared candidates in any year may greatly exceed the average. Besides, there are, as every one who has experience in the line knows, good and bad years in respect of the proportion of good and bad students in a class, just as there are good and bad years in respect of many natural phenomena, though we are not always able to ascertain the cause. So then the University may not always and alone be responsible for the fluctuations noticed. So far as it is, it should do its best to prevent any recurrence of the evil. One of the remedies suggested, the appointment of a permanent Board of Examiners, though theoretically perfect, involves many practical difficulties. The subject will, however, I hope, receive careful consideration soon.

Whilst on this subject of criticism on our work, I would beg leave to say to our critics in all sincerity and earnestness, that such of them as are in a position directly to assist the University in its deliberations, will do immensely greater service to it if they will favour it with their counsels first, and then, if need be, with their criticisms next.

I must now offer my young friends who have just obtained their degrees my most hearty congratulations. The success of the lady-graduates, one of whom I have had the pleasure of admitting to her degree, is to my mind matter for special congratulation. In saying this I am far from insinuating that their success was unexpected or exceptional; on the contrary, considering the highly susceptible nature of the gentler sex which enables them to imbibe knowledge soon and retain it long, such success is but natural, and the poet truly says:

"स्त्रियो हि नाम खल्वेता निसर्गादेव पण्डिताः।
पुरुषाणान्तु पाण्डित्यं शास्त्रैरेवोपदिश्यते॥"

'Men seeking knowledge long must strive,
And over many volumes pore;
But favoured women all their lore
With ease from Nature's grace derive.

What I mean to say is that their success is a more sure index of the progress of education than the success of young men can be. Young men may and very often do seek for knowledge in order to succeed in life; but when women, who are far less likely to be swayed by such motives, seek for it, the love of knowledge for its own sake must be influencing those whose influence upon society though gentle is irresistible.

I would also specially congratulate the three distinguished graduates in Arts who have won our most valuable prize—the Premchand Roy Chand Studentship, and the young Doctor who, after a brilliant college career, has so well earned the highest degree in Medicine. I would, at the same time, remind the former that their valuable prizes though given as rewards for past labour are really intended as incentives to future exertion, and I would exhort the latter to emulate the example of the eminent members of his noble profession at home and abroad.

Many of you, my young friends, may be thinking now that you have passed through the first stage of life, the stage of preparation, and are about to enter the second, the stage of action. The first stage with its incessant toil and rigid discipline may have seemed to you a disagreeable one, while youthful fancy may be painting the second in glowing colours as the stage of unrestrained activity and unimpeded fruition. I should have been most unwilling to dispel this pleasing illusion, had I not been firmly convinced that it is the source of little joy and much sorrow. The illusion must soon disappear and leave painful disappointment behind. Better far that we should at once know the realities of our situation, be they agreeable or disagreeable, to be prepared beforehand to meet what awaits us.

Now one of the most distressing realities of the world you are going to enter, is the immense disproportion between the many that

toil and the few that succeed. If at any of the examinations held in this hall there is heavy failure, the result attracts public attention, and evokes criticism, and steps are taken to prevent its recurrence in future. But who can criticise to any purpose the conduct of the world's examinations? We must take the world as it is. But if you cannot make the world conform to your views, you must not, on the other hand, servilely suit yourselves to the world to achieve success. Depend upon it that there is often more honour in deserving success, than in attaining it. Have firm faith in the consoling truth that in the inscrutable dispensations of Providence, out of evil cometh good, and that adversity is not an unmixed evil. I do not ask you to imitate the example of the pious lady in the Puranas who preferred adversity to prosperity because it enabled her better to remember her Maker, for prosperity is not necessarily an evil, and should therefore be greeted when she comes. But I do ask you to submit, if it ever be your lot to do so, to adversity's stern and chastening rule with calmness and fortitude. If she bears a frowning look, remember that

> "Scared at her frown terrific fly
> Self-pleasing folly's idle brood,
> Wild laughter, noise, and thoughtless joy,
> And leave us leisure to be good."

Another perplexing reality of our situation is the strange inconsistency between profession and practice. Very few men outwardly profess any principles of doubtful propriety, but fewer still perhaps are they who can inwardly say unto themselves they have never swerved from their professed principles. As students you have spent much time in learning principles ; be it then your first aim upon entering life rigidly to adhere to those principles in spite of the contaminating influence of example. If you wish to succeed in life, that is, if you wish to control the material forces of Nature and the still more subtle forces that move society, so as to make them subserve your purpose, you must possess a powerful and a resolute will,—a will at least as powerful and resolute as can enable you to bring your own actions into conformity with the principles you profess.

If you are able to surmount these difficulties, if you can reconcile your practice with your principles, and if furthermore, you can reconcile yourself with your lot, you shall have earned that peace within, that true source of happiness, which even the most successful men often fail to attain. And your success, though measured by the amount of work done it may not be great, will surely not be small if measured by the moral strength acquired, strength which will not only sustain you in the race of life, but will stand you in good stead even in that awful stage of it that leads to eternity.

The Vice-Chancellor then declared the Convocation closed.

(Confirmed), A. M. NASH,

GOOROO DASS BANERJEE, *Registrar.*

Vice-Chancellor.

MINUTES

OF THE

FACULTY OF ENGINEERING

FOR THE YEAR 1891-92.

No. 4.

THE 26TH JANUARY, 1892.

Present:

COL. J. M. MCNEILE, R.E., *President, in the Chair.*

THE HON'BLE SIR ALFRED CROFT, K.C.I.E.
ALEXANDER PEDLER, ESQ., F.C.S.
J. S. SLATER, ESQ.
RAI KSHETRANATH CHATTERJEE, BAHADUR, M.I.C.E.
W. KING, ESQ., D. SC., F.G.S.
J. H. APJOHN, ESQ., M.I.C.E.
C. LITTLE, ESQ., M A.
A. MACDONELL, ESQ., M.A.

271. The Faculty met to consider at the request of the Syndicate whether a special course for Mining Engineers might not with advantage be introduced into the Examination for Honours in Engineering, either as an additional, or as an alternative subject.

RESOLVED—

That the question be referred to a Committee consisting of—

MR. J. S. SLATER.
DR. W. KING.
MR. A. MACDONELL.

(Confirmed), A. M. NASH,

J. M. MCNEILE, COL., R.E., *Registrar.*

President.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 12.

THE 13TH FEBRUARY, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C.I.E.
CHARLES H TAWNEY, ESQ., C.I.E.
THE HON'BLE SIR ALFRED CROFT, K.C.I.E.
THE HON'BLE MR. JUSTICE AMEER ALI, C.I.E.
THE HON'BLE SIR JOHN EDGAR K.C.I.E., C.S.I.
E. A. BIRCH, ESQ., M. D.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.
BABU ASUTOSH MUKHOPADHYAY, F.R.A.S, F.R.S.E.

272. The Minutes of the meetings of the Syndicate held on the 9th and the 19th January were read and confirmed.

273. Read the Minutes of the Faculty of Engineering dated the 26th January.

ORDERED—

To be recorded.

274. The Registrar reported that he had received information from Mr. Ewbank, superintending the Entrance Examination at Patna, that some of the envelopes containing Entrance papers appeared to have been tampered with, and that the questions in some of the subjects were known at Patna before the examination commenced.

RESOLVED—

(1.) That a fresh examination be held of all the candidates examined at Patna, to commence on the 14th March.

(2.) That it does not appear necessary at present to take similar action with respect to other centres.

(3.) That Mr. Ewbank be requested to furnish an official report of the circumstances, so far as known to him.

(4.) That the proceedings of the Syndicate with regard to the matter be submitted to the Senate at the earliest opportunity, and that the Vice-Chancellor be requested to fix an early date for a meeting of the Senate.

275. The Registrar reported that Messrs. W. Young and G. C. Bose having declined to accept their respective appointments as Examiner in English and Geography, he had in anticipation of the sanction of the Syndicate, appointed the Rev. A. B. Wann and Babu Hridaychandra Banerji in their stead.

RESOLVED—

That the action of the Registrar be approved.

276. The Rev. Dr. K. S. Macdonald was appointed Examiner in English for the ensuing F. A. Examination in place of Mr. T. W. Arnold, resigned.

277. Read a letter from the President of the Faculty of Medicine intimating that Dr. Coulter had declined to accept the Examinership in Midwifery, and recommending that Dr. Walsh may be appointed in his place.

Read also a further letter from the President of the Faculty of Medicine recommending that Dr. Hiralal Ghosh may be appointed Examiner in Materia Medica in place of Dr. Brown, who, owing to his transfer to Cooch Behar, will not be able to perform the duties of an Examiner.

RESOLVED—

That Dr. Walsh be appointed Examiner in Midwifery and Dr. Hiralal Ghosh Examiner in Materia Medica.

278. The Hon'ble Mr. Justice Ameer Ali presented a copy of Rattigan's Science of Jurisprudence and requested that it might be referred to the Faculty of Law for consideration whether it should be adopted as a text-book for the B. L. Examination.

RESOLVED—

That the book be referred to the Faculty of Law.

279. Read a letter from the Officiating Deputy Secretary to the Government of India, in the Home Department, intimating that the Governor-General in Council is pleased to sanction the affiliation of St. John's College Jaffna, to the University in Arts up to the F. A. Standard.

ORDERED—

To be recorded.

280. Read an application from the Chairman of the Midnapur Municipality requesting that the Midnapur College may be affiliated to the University in Law.

RESOLVED—

That an application be made to the Government of India, in the Home Department, requesting the Governor-General in Council to affiliate the Midnapur College to the University in Law.

281. Read the following letters from the Officiating Deputy Secretary and Treasurer, Bank of Bengal :—

"BANK OF BENGAL,
DEPOSITORS' DEPARTMENT,
Calcutta, 8th February, 1892.
No. 84/115.

To
THE REGISTRAR,
CALCUTTA UNIVERSITY, SENATE HOUSE.

DEAR SIR,

I beg to advise the purchase of 4 per cent. Government Security for Rs. 25,000 (as per enclosed Memo.) agreeably with instructions, a/c Reserve Fund.

Yours faithfully,
(Sd.) P. T. LEWIS,
Offg. Dy. Secretary and Treasurer.

P.S.—The security has been converted into stock as desired.

MEMO. OF PURCHASE.

Account Registrar, Calcutta University, Reserve Fund.

	Rs	As	P.	Rs	As	P	Rs	As.	P.
4 per cent. Government Security, No. 317144 of 1865...	25,000	0	0						
Premium @ Rs 5/4 per cent. ...	1,312	8	0						
				26,312	8	0			
Interest from 1st November, 1891, to 5th February, 1892, being, 0 years, 3 months, 4 days @ 4 per cent. ...	261	14	10						
Less Income Tax @ 5 pie per Rupee	6	12	9						
				254	5	1			
							26,566	13	1
To Commission @ ¼ per cent.							66	6	8
,, Brokerage @ $\frac{1}{10}$ per cent.									
,, Renewing fee ...									
,, Recept Stamp .									
,, Postage, &c.									
				Rupees .			26,633	3	9

BANK OF BENGAL,
DEPOSITORS' DEPARTMENT,
Calcutta, 5th February, 1892.

"BANK OF BENGAL,
DEPOSITORS' DEPARTMENT,
Calcutta, 27th January, 1892.
No. 84/89

TO

THE REGISTRAR, CALCUTTA UNIVERSITY,
SENATE HOUSE.

DEAR SIR,

With reference to your letter No. 1780 of 28th November, 1891, I beg to advise the purchase of 4 per cent. Calcutta Municipal Debentures for Rs. 2,000 (as per enclosed Memo.) agreeably with instructions, account Sir Radhakanta Memorial Fund.

Yours faithfully,
(Sd.) P. T. LEWIS,
Offg. Dy. Secretary and Treasurer.

MEMO OF PURCHASE.

Account Registrar, Calcutta University, Sir Radhakanta Memorial Fund.

	Rs	As.	P.	Rs	As.	P.	Rs	As.	P.
5 per cent. Calcutta Municipal Debentures, Nos. 154 and 155 of 1890 91 @ Rs. 1,000	2,000	0	0						
Premium @ Rs. 11-8 per cent	230	0	0						
				2,230	0	0			
Interest from 1st October 1891 to 26th January 1892, being 0 years, 3 months, 25 days, @ 5 per cent	31	15	1						
Less Income Tax @ 5 pie per Rupee .	0	13	3						
				31	1	10			
							2,261	1	10
To Commission @ $\frac{1}{4}$ per cent							5	10	5
,, Brokerage @ $\frac{1}{16}$ per cent									
,, Renewing fee ..									
,, Receipt Stamp ...									
,, Postage, &c. ...									
				Rupees ...			2 266	12	3

BANK OF BENGAL,
DEPOSITORS' DEPARTMENT,
Calcutta, 26th January, 1892.

ORDERED—

To be recorded.

282. Read a letter from the Director of Public Instruction, Burmah, requesting that Bassein and Mandalay may be appointed centres for holding the Entrance Examination.

RESOLVED—

That the Syndicate regret that they are unable to make Bassein and Mandalay centres for holding the Entrance Examination.

283. Read an application from Mr. K. Sabba Ram, Sub-Editor to the *Hindu*, requesting permission to publish in a volume the addresses delivered at the Annual Convocations of the University.

RESOLVED—

That the Syndicate are unable to grant the request, as it is doubtful whether they have the right to do so.

284. Read an application from Jaminimohan Chatterjee, supported by the written consent of the Registrar, Allahabad University, praying that he may be allowed to appear at the F. A Examination.

RESOLVED—

That Jaminimohan Chatterjee be admitted to the F. A. Examination provided he satisfies the other requirements of the University.

285. Read an application from Vasudeo Vaman Shikhar, supported by a certificate from the Registrar, Bombay University, praying that he may be allowed to go in for the F. A. Examination.

RESOLVED—

That Vasudeo Vaman Shikhar be admitted to the F. A. Examination provided he satisfies the other requirements of the University.

286. Read a letter from Khaja Abdullah Adam requesting to be informed whether a student who failed at the final L. M. S. Examinatian of the Bombay University will be allowed to appear at the ensuing final Medical Examination of the Calcutta University.

RESOLVED—

That Khaja Abdullah Adam be informed that a student who has failed at the final L. M. S. Examination of the Bombay University cannot be admitted to the final L. M. S. Examination of this University unless he has passed the F.A. Examination or an examination recognised as equivalent to it.

287. Read an application from Satkari Chatterjee praying that under the circumstances therein stated he may be allowed to appear at the B. L. Examination of 1892 provided he attends 75 per cent of the lectures delivered from the date on which his case was decided by the Syndicate to October next, and not from November 1891, as directed in this office letter No. 1911, dated the 15th January, 1892.

RESOLVED—

That Satkari Chatterjee be admitted to the B. L. Examination of 1892 provided he attends 75 per cent.

of the lectures delivered from the 12th December, 1891, to the end of October, 1892.

288. Read an endorsement from the Principal, Ripon College, forwarding an application from Sasibhushan Chatterjee praying that under the circumstances stated in the application he may be allowed to go in for the B. L. Examination provided he attends 75 per cent. of the lectures for a full year.

RESOLVED—

That the Principal be informed that Sasibhushan Chatterjee will be admitted to the B. L. Examination provided he attends 75 per cent. of the aggregate number of lectures delivered in three years, and that if he fails to do so he will be required to attend lectures for two years under the new Regulations.

289. Read an endorsement from the Principal, Ripon College, forwarding an application from Mafukhoral Islam praying that he may be allowed to go in for the B. L. Examination of 1893.

RESOLVED—

That the Principal be informed that Mafukhoral Islam must attend lectures for two years under the new Regulations.

290. Read an application from Dibyasinha Misra, supported by original certificates from the Principal, Ravenshaw College, Katak, praying that under the circumstances stated in the application he may be allowed to appear at the B. L. Examination of 1893 or of any subsequent year without attending further lectures.

RESOLVED—

That Dibyasinha Misra be informed that he will be admitted to the B. L. Examination of 1893 or any subsequent year without further attendance at lectures.

291. Read a letter from Sir Roper Lethbridge, C.I.E., forwarding certain text-books for submission to the Boards of Studies in the respective subjects and to the Syndicate.

RESOLVED—

That the books be referred to the Boards of Studies.

292. Read a letter from the Manager, Indian Press, Allahabad, forwarding a copy of Mr. Keene's "Text-book of Indian History" and requesting that the same may be referred to the Board of Studies in History, Political Economy and Geography for consideration.

RESOLVED—

That the book be referred to the Board of Studies in History, Political Economy and Geography.

(Confirmed), A. M. NASH,

Registrar.

GOOROO DASS BANERJEE,

Vice-Chancellor

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 13.

THE 16TH FEBRUARY, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D.L.,

Vice-Chancellor, in the Chair.

NAWAB ABDUL LUTEEF, BAHADUR, C.I.E.
CHARLES H. TAWNEY, ESQ., C.I.E.
BABU MOHINIMOHAN RAY
J. S. SLATER, ESQ
RAI TARAPRASANNA RAY, BAHADUR F.C.S.
BABU ASUTOSH MUKHOPADHYAY F.R.A.S., F.R.S.E.

293. The Registrar enquired whether the re-examination of the Patna candidates could be held at Calcutta instead of Patna in order to allow of the papers being printed immediately before they were required.

RESOLVED—

That the re-examination be held in Calcutta.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES OF THE SENATE

FOR THE YEAR 1891-92.

No. 7.

THE 20TH FEBRUARY, 1892.

Present

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D.L.,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF, BAHADUR, C.I.E.
RAI JAGADANANDA MUKERJEE, BAHADUR.
CHARLES H. TAWNEY, ESQ., C.I.E
O C. DUTT, ESQ.
MAHAMAHOPADHYAY MAHESCHANDRA NYAYRATNA, C.I E.
A. PEDLER, ESQ., F.C.S.
P. K. RAY, ESQ., D. SC.
F. J. ROWE, ESQ.
BABU SURYYAKUMAR SARBADHIKARI.
A. M NASH, ESQ.
REV. K. S. MACDONALD, D.D.
RAI LALMADHAB MUKERJEE, BAHADUR.
E. A. BIRCH, ESQ., M.D.
BABU GAURISANKAR DE.
BABU DINABANDHU DATTA.
BABU DEBENDRANATH RAY.
BABU BHOLANATH PAL.
BABU NILMANI MUKERJEE.
BABU SARADACHARAN MITRA.
C. J. H. WARDEN, ESQ., M.D.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.
BABU DURGAMOHAN DAS.
BABU UMESCHANDRA DATTA.
BABU ASUTOSH MUKHOPADHYAY, F R.A.S , F.R S.E.
BABU GANESCHANDRA CHANDRA.
REV. H. WHITEHEAD.
BABU SYAMACHARAN GANGULI.
RAI GUNABHIRAM BARUYA, BAHADUR.
BABU JOGINDRACHANDRA GHOSH.
BABU MAHENDRANATH RAY.
REV. A. P. BEGG.
BABU KAILASCHANDRA BASU.

294. The Senate proceeded to consider the following resolutions of the Syndicate and the following report of Mr. Ewbank :—

"The Registrar reported that he had received information from Mr. Ewbank, superintending the Entrance Examination at Patna, that some of the envelopes containing Entrance papers appeared to have been tampered with, and that the questions in some of the subjects were known at Patna before the examination commenced.

"Resolved,—(1.) That a fresh examination be held of all the candidates examined at Patna, to commence on the 14th of March.

"(2.) That it does not appear necessary at present to take similar action with respect to other centres.

"(3.) That Mr. Ewbank be requested to furnish an official report of the circumstances, so far as known to him.

"(4.) That the proceedings of the Syndicate with regard to the matter be submitted to the Senate at the earliest opportunity, and that the Vice-Chancellor be requested to fix an early date for a meeting of the Senate."

"FROM

A EWBANK, ESQ.,

PRINCIPAL, PATNA COLLEGE,

TO

THE REGISTRAR,

CALCUTTA UNIVERSITY.

Dated Bankipore, the 18th February, 1892.

SIR,

I REGRET to have to report that some of those packets which contained the Entrance Examination question papers, and which were sent January 22nd from Calcutta to this College, were opened fraudulently before the Examination began. I have made application for special assistance towards clearing up the mystery. The time of the theft is unknown at present; nor am I even sure of the place. On January 23rd a postman brought me 25 sealed packets; they were made over to me at my private residence; the outer envelopes were in such perfect order as to exclude the idea that the packets had been tampered with in the Post Office; nor did I on removing the outer envelopes notice any signs that the inner envelopes had been tampered with. I conclude that the inner envelopes were afterwards tampered with, *i.e.*, subsequently to the time I received them. These inner envelopes were not by me re-examined at any subsequent time before the examination commenced. Various rumours were in circulation on Monday, the first day of examination. But nothing had then happened to make me suspect that my packets had been visited. But on the morning of Tuesday, February 9th, I received, on going to the College, convincing proof that the paper on Arithmetic and Algebra had become known. I did not then imagine for a moment that my packets had been tampered with.

On the morning of Tuesday, there were reports that the Geometry paper had been known; but all the questions shewn to me as being in the Geometry paper were really not in that paper: nor had my Geometry envelopes been cut.

Thus my belief on Tuesday evening was that the morning paper only had been known beforehand. On Wednesday morning I discovered that the Persian paper was known; but it seemed that the other morning papers were *not* known. All the Wednesday morning papers had been tied by me in one bundle soon after I had received them from the Post Office. Thus on Wednesday morning my first idea was that the Persian paper had been obtained in Calcutta. But the inner envelopes which had been opened at the College and had been crumpled up and thrown aside were then searchingly examined. The accidental rough usage

which these inner envelopes had received probably helped to make the seams come open. For it then became evident that in four cases an envelope had been slit and cemented. One seal—and one seal only—had in each case been opened, and the envelope had been resealed with a seal which was a more or less good imitation of the University seal. When on Wednesday I discovered that some of the envelopes had thus been treated I opened the box which contained the Thursday papers. There were three packets of Entrance History questions and two of Entrance Geography questions. Of these five packets one only showed the same signs —though not of course so distinctly as did the envelopes which had been opened at College and crumpled up, or otherwise treated with accidental roughness.

But that particular Entrance History packet had undoubtedly been cut open. I did not then and there open the packet. But next day I found on going to the College that the History questions were known. I showed the suspected envelope to Babu Bhagwan Chandra Dutt, Second Master of the Collegiate School, and we carefully counted the papers that it contained when it was opened in public as usual. The suspected packet contained 178 copies, while each of the other two History packets had 180. The mere difference of the numbers would not prove anything. But Mr. Phillips, Head Master of the Collegiate School, had agreed with me on Wednesday that the envelopes had been cut. It was, of course, at my house that he and I examined the Thursday papers. In such a case as this, we naturally assume that some house servant has assisted or connived. All my servants are old servants. They are all still here, and the question of their guilt or innocence will of course form a part of that special investigation for which I have applied. My own impression is that my servants are not implicated. I believe that the matter can be cleared up if it is properly taken in hand. There is no personal property to be recovered, and there are a considerable number of Patna students who could give information if they wished. Thus the matter to me seems an excellent one for a careful and systematic inquiry as time unlimited can be given to follow up various clues.

The F. A. and B. A. papers reached me February 3rd. After I had discovered that some Entrance packets had been opened, I naturally examined all my F. A. and B. A. packets. They are certainly intact I then took them to the Bank of Bengal together with a packet of Mookhtear Examination papers which I happened to have at the time. The F. A. and B. A. Examinations are to commence February 29th. Thus the papers are on my hands for 26 days.

This College has never had a safe. For twelve years I have been receiving University packets to remain unused for several weeks.

For about fifteen years my predecessor had the same haphazard arrangements. I understand that the Syndicate have decided that a safe should be provided at each Examination centre. An ordinary safe is only perfect if servants are warranted incorruptible. After the memorable experience of this year I should decline to trust my packets to an ordinary safe. I think that in future all the following precautions should be taken.

(1.) The safe should have two different locks. One key should be with the Principal of the College; the other key should

be with some other responsible person. It matters little who that other person may be. The essence of the matter is that the two keys are not to be kept in one and the same private house; so one key will have to be stolen from one house before a burglary is committed in the other house. Such an arrangement exists in the Bank of Bengal.

(2.) There should be furnished me a Police guard for day and for night during the time the papers are with me. And if that time can be reduced from weeks to days, so much the better.

The Police guard have to look after the safe. They need not be ordered to protect anything else in the house.

(3.) If packets are still to be sent me by the Post Office, I should receive previous information of the day they are likely to reach Bankipore. If they arrive at a subsequent date it matters little. But they should not arrive on any day previous.

(4.) The packet should, by the Calcutta Post Office, be addressed to the local Post Master. To him they should come as one large packet in a bag or other cover duly sealed with Post Office seals. He should open this packet with his own hands or by some agent definitely chosen. The separate packets as made up by the Registrar and addressed to this College should then be offered to me, not by an ordinary peon, but by some clerk of the Post Office. The packets should be delivered to me not at the College, but at my private house.

(5) When a book is wrapped up in paper we usually fasten the paper with one piece of string. This string passes round the parcel both length-wise and cross-wise. It is then fastened with a knot. I think that a similar line should be fastened round the inner envelope, only instead of string I would have wire—and where the wire is knotted there would be a well defined seal. The envelope thus protected would be placed as usual in an outer envelope, and of this outer envelope only the Post Office have to take cognisance.

These precautions seem very elaborate. But the stealing of question papers seems likely to become a fine art in India. The arrangements for ordinary thefts have, we know, been brought to high perfection. In a theft of University papers not only is it desired by the thief that the papers should be obtained, but that the person in charge should never suspect the abstraction.

On receiving the packets the procedure should be as follows. The officer who at the local centre is in charge of the examination should associate with himself at least one other officer for the examination of the packets. Each outer envelope should be so opened as not in any way to damage a seal. These outer envelopes should be preserved. If to the local centre the packets are still to be sent several weeks before they are required, these packets must once a week be examined. If the Examination itself begins on a Monday, the packets should also be examined not later than the Thursday preceding.

Each inner envelope would have its wire running under three seals. One seal would be in the middle where the wire is knotted, and one seal would be at each of the narrow sides of the envelope.

On each Examination day the wire would be cut, and the envelope would be so opened as not to damage any seal. These precautions complete the series.

Such evidence as we have collected points to two conclusions One is that much money has been spent in obtaining possession of the papers. The other conclusion is that most of the money was not spent on labour constructive or destructive.

The last sentence may need explanation. It appears that a copy of the University seal had been made some considerable time before the Entrance papers had been despatched from Calcutta.

Money spent on that seal may be described as spent in labour, and here the labour is constructive.

If a thief had to work a passage through a masonry wall this might be called labour destructive. Thus, what I mean is that much money was not spent in overcoming material obstacles. On future occasions we have to make thefts difficult even if bribes are accepted.

It is to make useless the bribery method that I think we should adopt that peculiar system of checks and counter checks which I have in this letter described.

Public opinion in the Patna City in speaking of this theft of papers does not make much use of such words as scandalous or dishonourable. On the contrary the feat is usually described as skilful, ingenious, courageous. It is a brilliant episode in the never-ceasing warfare between Examiner and Examinee.

We must look all facts in the face, and the particular aspect in which this matter is regarded by many persons (who otherwise are eminently respectable) is an element of the question which must by no means be ignored. If a young student is told by the University that he has behaved shamefully, and if by highly respectable men around him he is told that he has done splendidly, the only blunder consisting in the discovery of the theft being left possible, then we—Educational officers—are working under conditions which bear no resemblance to University work in England.

I have the honour to be,

SIR,

Your most obedient Servant,

(Sd.) A. EWBANK,

Principal."

The Vice-Chancellor, said :—A most unfortunate incident which leads to consequences of a serious nature has occurred in connection with the last Entrance Examination, and it is this that has called us together here this afternoon. You have seen from the notice paper, and you may have seen from newspaper reports, that the Entrance Examination questions in certain subjects were known in Patna before the examination took place. It will appear from the report that is now before you that the questions were stolen, and must have been stolen whilst they were in the custody of Mr. Ewbank ; and considering the way in which they must have been got at, it would not be safe to conclude that the papers in any one subject had

not been tampered with. That being so, it is clear that the examination held at Patna must be cancelled, and the candidates examined again. There are, however, two other questions connected with this matter which are not equally free from doubt and difficulty. In the first place, the question arises whether it would be sufficient if only the examination held at Patna is cancelled, or whether it would not be necessary to cancel the examination altogether, and have a re-examination of all the candidates? The next question that arises is, if there is to be a re-examination, when and where is it to be held? The exact date of the theft of the questions not being known, it is impossible to say that the questions were not out in Patna in time to be circulated in other centres; and it is also true that we should do our best to preserve the integrity of our examinations. But with all due regard for those considerations, in the absence of any reasonable ground for suspecting that the examination held at any other centre than Patna was tainted with fraud, the Syndicate did not consider it right to cancel the examination at other centres also, especially as it would involve the hardship of subjecting to re-examination over five thousand candidates examined at thirty different centres. There is one other difficulty which a partial re-examination such as that proposed involves, and which ought not to be passed over without notice. If some of the candidates are to be re-examined upon a new set of questions, however carefully these questions are framed, still the examination will be open to the objection, that the qualifications of different candidates are tested according to different standards. But any unfairness that the partial re-examination might thus involve is nothing or almost nothing compared with the hardship to the candidates pointed out above, to say nothing of the delay and expense which a wholesale re-examination would involve. For this reason the Syndicate resolved upon cancelling only so much of the examination as was held at Patna and of re-examining the Patna candidates. Then comes the question, when is the re-examination to be held? As the F.A. and B.A. examinations are to commence on the 29th of this month, and the previous sanction of the Senate was deemed necessary to be obtained before any action was actually taken, the Syndicate could not very well fix any date earlier than the 14th of March for the re-examination, and it could not very well be that the matter should be put off for a

longer period, seeing that the result of the examination must appear in time to enable candidates to join the first year College classes. The next matter of importance is the question regarding the place where the examination is to be held. The Syndicate was anxious to avoid adding to the hardship of the candidates who must submit to this re-examination, and it was only when experienced gentlemen who were to have the responsibility of printing the questions or getting them written or lithographed pointed out to the Syndicate the impracticability of safely printing them in time for the examination on the 14th of March, that the Syndicate felt constrained reluctantly to come to the resolution that the re-examination should be held in Calcutta. The Syndicate never overlooked the inconvenience of the candidates in coming here. The Syndicate resolved upon holding the re-examination here not as a matter of punishment to the Patna boys, but merely because it is impracticable to hold an examination at Patna on the date fixed. If it was to be held here, the questions might be printed on the morning of the day the examination was held, and the compositors and printers kept under restraint until the examination commenced—of course I mean voluntary restraint, to which they would agree beforehand, a thing which was considered not practicable in Patna. The matters requiring decision are of the gravest importance not only to the candidates but to the University, and they are not provided for by Act of Incorporation or the Bye-laws, and the Syndicate therefore thought it right to submit its decision for your confirmation or further directions. Before I conclude I wish to say a word or two about certain remarks made in the report of Mr. Ewbank. He suggests some excellent precautions for the future, and it is very much to be regretted that they were not taken in the past. While saying this and without any desire to gloss any want of care on the part of any one, or to disclaim in the slightest degree any share of blame which may justly attach to us for the result which has followed, I think I ought to add that so far as we can see, there has been no want of due care and vigilance on the part of our Registrar (applause), the officer primarily responsible for the safe custody and despatch of the questions. Even as regards the particular centre where the questions have leaked out, or rather I should say have been stolen, no blame can attach to the conduct of the Registrar, because they were sent not to a new or irres-

ponsible officer, but to an experienced educational officer of high position, and one who has been helping us for a long series of years. While this unfortunate incident has been a matter of regret to all of us, and to none more than to the humble individual who has now the honour of addressing you, what has pained me more than anything else is a certain fact that is stated in Mr. Ewbank's report, that some respectable gentlemen in Patna thought lightly of the conduct of those concerned in a case of theft like this, and I can only hope that Mr. Ewbank has been misinformed. With these remarks I now call upon the Registrar to place before you in detail the information that has reached him, and to state the reasons which have compelled him to advise the Syndicate to resolve upon holding the re-examination in Calcutta.

Mr. Nash said he thought that the facts as set out in Mr. Ewbank's report were very clear, and he knew very little beyond what was there stated. He had received a number of anonymous letters on the subject, but they only contained rumours. The reasons which had induced him to recommend to the Syndicate to hold a re-examination in Calcutta were briefly these: If the examinations were to be held at Patna on the 14th of March the papers must be printed in Calcutta or sent to some distant place where there was very little chance of the Patna candidates getting access to them. With regard to printing them at a distant centre there was a very serious difficulty, and it was better to have the examination postponed till April. There were three examinations, the F. A., B. A., and M. B., coming on shortly, so that it would be impossible to get away from Calcutta to see the printed proofs of these questions between now and the 14th of March. The other alternative was to have the papers printed in Calcutta. If this course was adopted he declined to be responsible or to do anything in regard to them. He was convinced that if the papers were printed in Calcutta, and if the Patna candidates wanted to get them, they would get them, and under these circumstances he would be unable to safe-guard the papers if they were to be printed in Calcutta. If the examinations were to be held here he would propose to have them lithographed or printed on the morning of the examination, and to have the men employed in this duty kept in the room where the papers were printed or lithographed until the papers were distributed. This would,

he thought, be the only way to make it impossible for the candidates to get at them.

Mr. Rowe said he should like to say a few words on one or two remarks which had fallen from the Vice-Chancellor as to the fact that the re-examination being held in Calcutta would be, though not so intended, a kind of punishment to the Patna students. If it was meant as a punishment, it would, in his opinion, be nothing more than those students as a body deserved. The principle of wholesale punishment for widespread crime was one frequently acted upon by the Government of this country. He understood that on the outbreak in a village of riots in which many of the inhabitants were involved, a force of policemen was not infrequently quartered on the villagers who, innocent and guilty alike, had to pay for the maintenance of the force. Speaking from his own experience as a pupil of one who had deservedly been called "the greatest Headmaster of the century," Edward Thring of Uppingham, he might be allowed to point out that one great principle of Thring's school government was this, that the whole class or the whole school were responsible for the undetected fault of any individual in the class or school. If a boy in a certain division committed a fault which was not denounced, the whole division was punished, and more than that, very often the whole school was punished; he had himself been often deprived of a holiday on account of faults committed by others in which he had taken no active part. And the principle was of proved efficacy in establishing and maintaining a high standard of honour in a school. More than that, if they wanted a higher authority still for such a principle, he would only refer them to the decrees of Providence, which so often permitted in this world the ruin of a community through the fault or folly of some few of its members. On the other hand, he thought it would be a graceful thing if the Senate were to pass a vote of confidence in their executive on this occasion. He was sure, from what he knew of Mr. Nash, and from what he had learnt of the infinite care he had taken, that no one could have used greater precautions than the Registrar had done. If the condition of public feeling regarding crimes of this kind were really as lax generally as Mr. Ewbank had described its being among certain "respectable" circles at Patna, it was difficult to imagine that any mechanical precautions would guard against

the theft, at some centre or other, of the examination questions.

The Rev. Mr. Begg said that, although he was in accord with very much of what had fallen from previous speakers, he was of opinion that only a few unprincipled men were to blame, and that there were a large number of innocent boys who would suffer if the course proposed was adopted. He suggested that the questions might be written on large black boards. If the questions were to be lithographed, it would not make much difference if they were lithographed the day before and sent up by mail train. He deprecated that anything they should decide about printing questions be discussed in public.

Nawab Abdool Luteef Bahadur said that it appeared to him that in order to avoid all difficulty, the best plan would be to defer the re-examination till April. He did not think that there would be any great hardship to the Patna students if the result of their examinations came out at a later period. He thought that to bring down the Patna students to Calcutta for the purpose of being examined here would entail a great deal of hardship on many a poor student, not only in their having to pay the necessary travelling expenses, but also in finding comfortable accommodation while here, which every examinee urgently required before and during his examinations. He thought that if it could be avoided they ought to avoid compelling them to come down. If the examination was held in April this difficulty could be done away with. There was no reason why they should not avail themselves of this alternative and have the examinations held at Patna. They could bring out the results of this examination a month or so afterwards.

Babu Gonesh Chunder Chunder said he had a suggestion to offer, which he hoped would find favour with the meeting. He did not think it would be necessary to bring the Patna boys down here, as there was no doubt that this course would entail a deal of hardship on a very large majority of the students. He had some experience of Lithography and had presses in his office. He thought that if the University sent up their Registrar to Patna with the questions, he could, on the morning of the day on which the examination would be held, within two hours, print off more than a thousand copies. He was of opinion that if this course was adopted it would obviate all the difficulty and save them

from the inconvenience of postponing the examination until April which was a very hot month. He did not think it would be right to bring the boys down here, as in addition to their expenses in coming down here, they would also have both the expense and difficulty of being housed here during the examination They were aware that they were nearly all poor boys who were in the majority of cases unable to pay these expenses. With regard to Lithography, if there were not a sufficient number of presses in Patna, the Syndicate could easily send up as many as would be required at a not too large cost to themselves.

Mr. C. H. Tawney said that he wished to say a word with regard to lithography. He had had a deal of experience with it, and did not advocate the adoption of the method suggested. There was great danger if the papers were printed in Calcutta. As to the suggestion regarding the use of black boards, he did not think any one could write a long Persian paper containing a number of small dots so as to be legible to all the students and satisfy them all. It appeared to him that their choice lay between two alternatives—either to put off the examina tions to April, or hold the examinations in the way suggested by Mr. Nash. As for the innocent candidates being obliged to come, he was very sorry for them, but he was afraid they would have to come. If the innocent did not choose to be punished with the guilty they should take steps to discover the guilty. He would suggest that the results of the other examinations should be published as soon as they were ready, and that the results of the Patna candidates should be published subsequently.

Rai Lal Madhub Mookerjee, Bahadur, said that from the remarks that had been made, there appeared to be two parties at the meeting, one in favour of punishing the whole school for the guilt of one boy, and the other with whom were associated thoughts of kindness which did credit to their humanity. He thought that thwisest course would be to adopt Babu Ganesh Chunder's suggestion.

The Vice-Chancellor said that he had allowed the discussion to go on thus far without there being any substantive motion before the meeting; but it was time that he should call upon the members to move some substantive proposition.

It was then proposed by Mr. Tawney, seconded by Nawab Abdool Luteef Bahadur, and carried unani-

mously, that the re-examinations begin at Patna on the 4th of April, that one paper be given each day, that the hours of examination be from 7 to 10 A.M., and that the 2nd recommendation of the Syndicate be adopted.

The meeting then came to a close.

A. M. NASH,
Registrar.

(Confirmed),

GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 14.

THE 12TH MARCH, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D.L.,

Vice-Chancellor, in the Chair.

CHARLES H. TAWNEY, ESQ., C.I.E.
THE HON'BLE MR. JUSTICE AMEER ALI, C.I.E.
E. A. BIRCH, ESQ., M.D.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.
BABU ASUTOSH MUKHOPADHYAYA, F.R.A.S., F.R.S.E.

295. The Minutes of the meetings of the Syndicate held on the 13th and 16th February were read and confirmed.

296. The Registrar reported that there being reason to suppose that the questions contained in the 1st Pass and Honour papers in Psychology for the recent B. A. examination were prematurely known, he had, in anticipation of the sanction of the Syndicate, required the candidates to answer fresh sets of questions in that subject.

RESOLVED—

That the action of the Registrar be approved.

297. The Registrar reported that he had arranged with Messrs. Tawney and Rowe to examine the B. A. answer papers in English allotted to Mr. A. C. Edwards who had resigned owing to his illness.

RESOLVED—

That the action of the Registrar be approved.

298. The Registrar reported that one Haradhan *alias* Rakhaldas Ghosh, a candidate for the recent Entrance examination, having submitted a false certificate

purporting to have been signed by the Head Master, Zila School, Pubna, in support of his application for admission to the examination, he had, in anticipation of the orders of the Syndicate, instituted criminal proceedings against the candidate, but that the High Court had decided that the offence was not punishable by law. The Registrar also suggested that steps be taken to prevent the commission of such offences in future.

RESOLVED—

(1) That the action of the Registrar be approved.

(2) That Haradhan *alias* Rakhaldas Ghosh be declared ineligible to appear at any of the examinations of the University.

(3) That the Director of Public Instruction, Bengal, be requested to state whether in his opinion it is desirable that the certificates in the application forms of private students should be signed only by Inspectors of Schools.

299. On consideration of the precautions suggested by Mr. Ewbank regarding the mode of delivery and safe custody of the Examination papers at distant centres, it was

RESOLVED—

(1) That in future the University examinations be not held at any centre unless the Superintendent at that centre can satisfy the Syndicate that the arrangements for the safe custody of the examination papers are sufficient.

(2) That the following gentlemen be appointed members of a Committee to revise the list of centres :—

Sir Alfred Croft.
Mr. Tawney.
The Registrar.

300. Read reports from some of the Head Examiners for the recent Entrance examination.

ORDERD—

To be recorded.

301. Read a letter from the Rev. J. Edwards resigning his appointment as Examiner in English for the Entrance examination

ORDERD—

To be recorded.

302. Read a letter from the Secretary to the Society of Unaided Colleges and Schools, forwarding for the consideration of the Syndicate a note drawn up by the Committee of the Society on some of the papers set at the recent Entrance examination.

ORDERED—

That the letter be referred to the Moderators.

303. Read a letter from Babu Sinhadas Mallik requesting that the application of his son, Purnachandra Mallik, for permission to appear at the re-examination to be held at Patna, may be laid before the Syndicate for orders.

RESOLVED—

That Babu Sinhadas Mallik be informed that his son cannot be admitted to the examination at Patna.

304. The Registrar enquired whether the candidates who were absent during the recent Entrance examination at the Patna Centre could be allowed to sit at the examination to be held in April.

ORDERED—

That candidates who were absent from the original examination be not admitted.

305. Read a letter from Babu Asutosh Mukhopadhyay, F.R.A.S., F.R.S.E., proposing that the examination papers should continue to be printed and published as at present.

ORDERED—

That the examination paper be published in the Calendar.

306. Read a letter from the officer in charge of the recent Entrance examination at Mussoorie urging on the consideration of the Syndicate the question of remuneration for the time and trouble incurred in the conduct of the examination, and pointing out that such services are recognised by the Government of the North-West Provinces by the payment of an honorarium to the officers selected to conduct the Government Final High Standard examination.

RESOLVED—

That no sufficient reason has been shewn for changing the present system of examination at centres outside the metropolis, which presumes voluntary co-operation on the part of the local officers interested in Education.

307. Read a letter from the Director of Public Instruction, Bengal, forwarding for orders of the Syndicate copy of a letter from the Principal, Tejnarayan College, Bhagalpur, together with an original transfer certificate of a student of the College, named Mahendranath Ray, in which the figures have been fraudulently altered, and also inviting attention to the suspicious part played by another student of the College in the Law Department, named Bisweswar Ghosh, as detailed in the Principal's letter.

Read also a letter from the Principal, Raj College, Burdwan, returning, with his remarks, the explanation furnished by Narayandas Ray regarding the alterations in his transfer certificate.

RESOLVED—

That the letters be sent to all the members of the Syndicate and brought up again at the next meeting.

308. Read an endorsement from the Director of Public Instruction, Bengal, forwarding a letter from the Prefect of St. Xavier's College, reporting that one of the students in the 1st year class, named A. E. Luddy, being a Jew, is unable to attend the College lectures on Saturdays, and will accordingly fall short of the prescribed percentage of attendance at lectures in those subjects in which not more than two lectures are delivered in a week unless the Syndicate allows him, as a special case, to make up the deficiency by attending private lectures on those subjects.

RESOLVED.—

That the Syndicate regret that they have no power to relax the rules in favour of individual students.

309. Read a letter from the Principal, Jaffna College, suggesting that Tamil should be prescribed as one of the second languages for the F. A. examination.

RESOLVED—

That the Syndicate are unable to add Tamil to the list of Languages.

310. Read a letter from the Director of Public Instruction, Ceylon, stating in reply to this office letter No. 2181, dated the 2nd February, 1892, that in his opinion the interests of the University would be best consulted by fixing Jaffna town as a centre for holding its examinations.

RESOLVED—

That the letter be referred to the Committe appointed to revise the list of centres.

311. Read letters from the Principals, Jaffna and St. John's Colleges, requesting that Jaffna may be appointed a centre for holding the F. A. examination.

RESOLVED—

That the letters be referred to the Committee appointed to revise the list of centres.

312. Read a letter from the Secretary to the Society of Unaided Colleges and Schools requesting that the Heads of Colleges may be consulted in regard to rules which may from time to time be proposed in connection with the working of these Colleges.

RESOLVED—

That the Secretary be informed that the Syndicate have always made a point of consulting the Heads of Colleges whenever it was considered advisable to do so, and that they propose to continue the practice.

313. Read a letter from the Officiating Deputy Secretary to the Government of India, in the Home Department, requesting that the Director of the Forest School at Dehra may henceforth be supplied with a copy of the University Calendar.

RESOLVED—

That a copy of the Calendar be supplied annually.

314. Read a letter from the Secretary to the Society of Unaided Colleges and Schools forwarding a copy of the proceedings of the inaugural meeting of the Society and requesting that the Society may be supplied with a copy of the University Minutes as they are published from time to time.

RESOLVED—

That it is unnecessary to send copies of the Minutes as there is no doubt that some of the members are also members of the Senate.

315. Read an endorsement from the Principal, City College, forwarding an application from Bhubanmohan Banerjee, praying to be admitted to the B. L. examination.

RESOLVED—

That the Principal be informed that Bhubanmohan Banerjee must attend 75 per cent. of the lectures delivered in 3 years.

316. Read a letter from the Principal, Behar National College, forwarding an affidavit in support of an application from Gokulananda Prasad requesting permission to add the word "Varma" after his name.

RESOLVED—

That the necessary changes be made in the University records.

317. Read a letter from Messrs. W. Newman & Co., requesting that they may be appointed Publishers to the University.

RESOLVED—

That the Syndicate see no reason to make any change in the present arrengements.

318. Read an application from Hari Shamrao Sukthankor, supported by the written permission of the Registrar, Bombay University, praying that he may be allowed to appear at the B. A. examination.

RESOLVED—

That Hari Shamrao Sukthankor be informed that he cannot be admitted to the B. A. examination of the University unless he has passed the First B.A. examination of the Bombay University.

319. Read a letter from the Principal, Patna College, reporting that the Bankipur High English School has ceased to exist, and that the Proprietor has absconded with the fees of some of the candidates who intended to appear at the recent Entrance examination from the School.

ORDERED—

To be recorded.

320. Read a letter from the Principal, Central College, Rutlam, forwarding an application from Baji Rao Balkrishna Bhate, supported by the written permission of the Registrar, Bombay University, praying to be admitted to the B. A. examination.

RESOLVED—

That Baji Rao Balkrishna Bhate be admitted to the B. A. examination provided he satisfies the other requirements of the University.

321. The Vice-Chancellor proposed that the "Student's Handbook of Mahomedan Law," by Mr. Justice Ameer Ali, be referred to the Faculty of Law for adoption as a text-book for the B. L. examination.

RESOLVED—

That the book be referred to the Faculty of Law.

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

FACULTY OF MEDICINE

FOR THE YEAR 1891-92.

No. 1.

THE 22ND MARCH, 1892.

Present:

E. A. BIRCH, ESQ., M. D., *President, in the Chair.*

BABU JAGADBANDHU BASU, M. D.
RAI LALMADHAB MUKERJEE, BAHADUR, L. M. S.
BABU DEBENDRANATH RAY, L. M. S.
RAI TARAPRASANNA RAY, BAHADUR, F. C. S.
BABU KAILASCHANDRA BASU, L. M. S.

322. The Faculty met to elect a President and two Representatives in the Syndicate for the year 1892-93.

RESOLVED—

(1.) That Dr. J. F. P. McConnell be elected President of the Faculty for the year 1892-93.

(2.) That Dr. J. F. P. McConnell and Maulavi Zahiruddin Ahmed be elected Representatives of the Faculty in the Syndicate for the year 1892-93.

A. M. NASH,
Registrar.

(Confirmed),
EDWARD A. BIRCH, M.D.,
President.

MINUTES

OF

THE FACULTY OF LAW

FOR THE YEAR 1891-92.

No. 3.

THE 24TH MARCH, 1892.

Present:

THE HON'BLE MR. JUSTICE CHUNDER MADHUB GHOSE, *in the Chair.*

THE HON'BLE MR. JUSTICE AMEER ALI, C.I.E.
BABU KALICHARAN BANERJEE.
BABU TRAILOKYANATH MITRA, D.L.
THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D.L.
THE HON'BLE RASHBIHARI GHOSH, D.L.
MAULAVI SURAJUL ISLAM, KHAN BAHADUR.
MAULAVI ABDUL JUBBAR, KHAN BAHADUR.
BABU SARADACHANRAN MITRA.
BABU GOLAPCHANDRA SARKAR.
A. F. M. ABDUR RAHAMAN, ESQ.
BABU ASUTOSH MUKHOPADHYAY, F.R.A.S., F.R.S E.
THE HON'BLE GANESCHANDRA CHANDRA.
BABU JOGINDRA CHANDRA GHOSE.
BABU UPENDRANATH MITRA.
BABU PRAMNATH PANDIT.

323. The Hon'ble Mr. Justice Ameer Ali proposed that the Hon'ble Mr. Justice Chunder Madhub Ghose take the Chair.

Carried unanimously.

A Committee consisting of the Hon'ble Dr. Rashbihari Ghosh, Babu Kalicharan Banerjee and Babu Golapchandra Sarkar was appointed to revise the lists of text-books for examinations in Law, and to consider whether Rattigan's "Science of Jurisprudence" and "Students' Hand-Book of Mahomedan Law" by Mr. Justice Ameer Ali should be adopted as text-books for the B. L. examination, with instructions to report within six weeks.

324. The Faculty then proceeded to elect a President and Representatives in the Syndicate for the year 1892-93.

RESOLVED,—

(1.) That the Hon'ble Mr. Justice Ameer Ali be elected President of the Faculty for the year 1892-93.

(2.) That the Hon'ble Mr. Justice Ameer Ali and Babu Mohinimohan Ray be elected Representatives of the Faculty in the Syndicate for the year 1892-93.

A. M. NASH,

Registrar.

(Confirmed),

CHUNDERMADHUB GHOSE,

Chairman.

MINUTES
OF
THE FACULTY OF ARTS
FOR THE YEAR 1891-92.

No. 3.

THE 26TH MARCH, 1892.

Present:

THE HON'BLE SIR ALFRED CROFT, K.C.I.E., *President, in the Chair.*

NAWAB ABDOOL LUTEEF, BAHADUR, C.I.E.
RAI JAGADANANDA MUKERJEE, BAHADUR.
RAI KANAILAL DE, BAHADUR, F.C.S., C.I.E.
COL. H. S. JARRETT.
BABU OMESHCHUNDER DUTT.
THE HON'BLE MR. JUSTICE J. O'KINEALY, LL., D., C.S.
MAHAMAHOPADHYAY MAHESCHANDRA NYAYARATNA, C.I.E.
A. M. BOSE, ESQ.
BABU KALICHARAN BANERJEE.
A. PEDLER, ESQ., F.C.S.
R. K. RAY, ESQ., D. SC.
BABU TRAILOKYANATH MITRA, D.L.
F. J. ROWE, ESQ.
THE HON'BLE RASHBIHARI GHOSH, D. L.
A. M. NASH, ESQ.
REV. K. S. MACDONALD, D. D.
NAWAB SYED AMIR HOSSEIN, KHAN BAHADUR, C.I.E.
G. A. GRIERSON, ESQ., LL. D., C.S.
BABU GAURI SANKAR DE.
MAULAVI SERAJUL ISLAM, KHAN BAHADUR.
RAI RAJKUMAR SARBADHIKARI, BAHADUR.
MAULAVI ABDUL JUBBAR, KHAN BAHADUR.
H. M. PERCIVAL, ESQ.
RAI RADHIKAPRASANNA MUKERJEE, BAHADUR.
RAI BANKIMCHANDRA CHATTERJEE, BAHADUR.
BABU ISANCHANDRA BASU.
BABU NILMANI MUKERJEE.
MAULAVI ABDUL HAI.
BABU SARADACHARAN MITRA.
NAWAB MEER MUHAMMAD ALI.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.
A. F. M. ABDUR RAHAMAN, ESQ.
J. H. GILLILAND, ESQ.
BABU HARAPRASAD SASTRI.
SHAMS-UL-ULAMA MAULAVI AHMAD.
BABU UMESCHANDRA DATTA.
W. KING., ESQ., D. SC., F.G.S.
C. E. BUCKLAND, ESQ., C.S.
SHAMS-UL-ULAMA SHAIKH MAHMUD GILANI.
C. LITTLE, ESQ.
J. C. BOSE, ESQ., B. SC.
BABU SRINATH DAS.
BABU ASUTOSH MUKHOPADHYAY, F.R.A.S., F.R.S.E.
BABU SYAMACHARAN GANGULI
BABU BIPINBIHARI GUPTA.
H. H. RISLEY, ESQ., C.I.E.
BABU SAMBHUCHANDRA MUKERJEE.
BABU JOGINDRACHANDRA GHOSE.
BABU MAHENDRANATH RAY.
PRINCE JEHAN KADR MIRZA MUHAMMAD WAHID ALI, BAHADUR.
REV. A. P. BEGG.
BABU UPENDRANATH MITRA.

325. The President proposed that the following report of the Committee appointed by the Faculty

at the meeting held on the 18th November, 1891, be adopted :—

We, the undersigned members of the Committee appointed to draw up a scheme for widening the matriculation course by the introduction of alternative subjects designed to facilitate the studies of candidates intended for professional careers, have the honour to submit our report.

The first question we have considered is what alternative subjects should be introduced, and with which of the present subjects they should be alternative. We are of opinion that, of the subjects in the present course, English, Mathematics, and Geography should remain compulsory for all candidates, and we recommend that any one of the following subjects be accepted as alternative to the Second Language, and either Translation or History in the case of candidates taking up an oriental language, or as alternative to the second language only in the case of candidates taking up an European language, two papers being set in each subject :—

(1.) Mathematics.—Euclid, Book VI, with easy deductions ; Algebra to Quadratics ; Plane Trigonometry of one Angle.

(2.) Elementary Physics and Elementary Chemistry.

(3.) Human Physiology, and *either* Zoology *or* Hygiene.

(4.) Botany, and *either* Geology *or* Zoology.

As to the extent of these subjects, we have not found it possible to define them by syllabuses, nor do we consider it necessary to do so ; for all practical purposes, the subjects may be best defined by naming text-books, and we subjoin (Appendix A) a list of books to indicate approximately the amount of knowledge which candidates may fairly be required to possess. When the scheme is ultimately adopted by the Senate, it will be for the Boards of Studies to recommend, from time to time, the text-books in each subject.

The next question we have considered is, whether any useful end may be secured by including in the matriculation course as optional subjects, any subjects of a practically useful character, acquaintance with which

may be held to qualify young men for employment in mercantile firms. The Bengal Chamber of Commerce and the National Chamber of Commerce were both invited to favour the Committee with their opinions on the subject, and their replies are appended to this Report (Appendix B). It will be noticed that the National Chamber of Commerce is opposed to the whole scheme, on the ground that none of the subjects in the existing curriculum can be profitably given up, and that scientific subjects are too abstruse to be well suited for Entrance students. As, however, the Faculty has already accepted the principle that it is desirable to widen the course for matriculation by the introduction of alternative subjects designed to facilitate the studies of candidates intended for professional (*i.e.*, non-literary) careers, we do not deem it open to us or necessary to discuss the objections raised by the National Chamber of Commerce. The Bengal Chamber of Commerce, on the other hand, not only sympathises with the attempt of the University to make the present Entrance standard more useful and more practical, but fully approves of the scheme and suggests the introduction of certain optional subjects. We recommend that, in addition to Drawing, the following subjects be introduced as optional subjects :—

(1.) Book-Keeping.

(2.) Short-hand (Pitman's System).

If a candidate passes in one or more of these subjects, the fact should be noted in his certificate; but success or failure in these subjects should not affect his success or failure in the examination, or his position in the pass list. As regards the other subjects recommended by the Chamber, Commercial Geography is sufficiently provided for in the text-books now in use, and Arithmetic is already a part of the Course. As to Type-writing and Mental Arithmetic, we do not think it is at present possible to remove the practical difficulties in the way of introducing these subjects. Lastly, as to Hand-writing, there can be no doubt that the subject is of the utmost importance, and is, as a rule, neglected by candidates, we recommend that, in order to induce candidates to pay greater attention to Hand-writing than they now do, a certain proportion, say 10

per cent., of the marks allotted to every paper set in the examination, be set apart for Hand-writing.

(Signed) A. Croft.
" E. Lafont, S. J.
" Alexander Pedler.
" Radhikaprasanna Mukherji.
" J. C. Bose.
" Asutosh Mukhopadhyay.

With the exception of the higher course in Mathematics, I doubt if any of the proposed courses will prove beneficial to students who intend to take up Engineering or Medicine as a profession, and to these the enquiry is now practically limited A higher course in *English* would be a distinct advantage to Engineer students, who receive no subsequent instruction in that language, and, I should think. would equally benefit Medical students. The requirements of professional students, however, can only be satisfactorily determined by a Committee of professional experts.

(Sd.) J. H. GILLILAND.

APPENDIX A.

PHYSICS.

Wright.—Elementary Physics.

CHEMISTRY.

Reynolds.—Experimental Chemistry, Part I, Introductory.

PHYSIOLOGY.

Murché.—Elementary Text-book of Physiology

BOTANY.

Oliver.—First Book of Indian Botany. Chaps. I to IV, VII and VIII of Part I.

ZOOLOGY

Nicholson.—Text-book of *Zoology*. Vertebrate animals.

GEOLOGY.

Bonney.—Manual of Geology, (S. P. C. K.)

HYGIENE.

A manual on this subject is about to be published by the Government of India.

BOOK-KEEPING

Thornton.—Primer of Book-keeping.

APPENDIX B.

BENGAL CHAMBER OF COMMERCE.
Calcutta, 11th December, 1891.

No. 1255—91.

FROM

S. E. J. CLARKE, ESQ.,
SECRETARY, BENGAL CHAMBER OF COMMERCE,

TO

A. M. NASH, ESQ., M.A.,
REGISTRAR, CALCUTTA UNIVERSITY.

SIR,

The Committee of the Chamber of Commerce instruct me to acknowledge the receipt of your letter No. 1774, dated the 27th of November last, in which you enquire whether, in the opinion of the Chamber, any useful end would be secured by including in the Matriculation Course, as optional subjects for examination, certain subjects acquaintance with which might fit young men for mercantile employment. You mention that Book-Keeping, Commercial Geography, and Short-hand had been suggested as suitable subjects for the purpose contemplated by the suggestion.

The Committee of the Chamber readily sympathise with any attempt having for its object to make the present Entrance standard more useful and more practical. No surer way of widening the sources of employment open to graduates of the University can be found than to fit them by means of their course of studies for useful employment in many walks of life.

The Committee consider the suggestion you have placed before them a good one, and would suggest that the following optional subjects should be included in the Matriculation Course of the University :—

Book-Keeping.	Arithmetic.
Hand-writing.	Mental Calculations.
Short-hand.	Commercial Geography.

Type-Writing.

I have the honour to be,
Sir
Your most obedient servant,
(Sd.) S. E. J. CLARKE,
Secretary.

Enclosures—Nil.

FROM

THE HONORARY SECRETARY,
BENGAL NATIONAL CHAMBER OF COMMERCE,

TO

A. M. NASH, ESQ., M.A.,
REGISTRAR, CALCUTTA UNIVERSITY.

Dated the 7th January, 1892.

SIR,

I am desired by the Committee of the Bengal National Chamber of Commerce to acknowledge the receipt of your letter No. 1775, dated 27th November last, requesting Chamber's opinion whether any useful purpose would be served by including in the Entrance Course as optional

subjects any subjects of a practical character likely to qualify young men for employment in mercantile firms.

In reply, the Committee beg to state that they do not think it would be proper to make any alteration in the present curriculum of the Entrance examination, for the four subjects at present included in the Entrance Course are such that none of them can be excluded with advantage to students, in view of having it replaced by any other subjects of a practical character, a fair knowledge of each of these four subjects being indispensably necessary to young men whatever walks of life they may choose to enter.

As for the proposal of introducing in the Matriculation Course a number of optional and alternative subjects of a scientific character, such as Physics, Chemistry, and Mechanics, the Committee regret to have to record their sense of absolute disapproval of it, for such subjects in the case of delicate youths, hardly in their teens, instead of being of any use to them, would very much hamper them in their studies The Committee think that subjects of a scientific character might very well be reserved for higher examinations.

I have the honour to be,

SIR,

Your most obedient servant,

(Sd.) SITANATH RAY,

Hony. Secy., Bengal National Chamber of Commerce.

Mr. Pedler seconded the motion.

Mr. Gilliland explained the reasons which had led him to write his note of dissent.

Mr. Rowe supported the proposal of the Committee regarding hand-writing.

Mr. A. M. Bose suggested that the various proposals in the report should be considered separately.

The President agreed to adopt this suggestion if any amendments were proposed to the scheme submitted by the Committee.

The Rev. Mr. Begg suggested that no schools should be allowed to take up an alternative subject unless they had been affiliated in that subject.

The President explained that schools were not affiliated, and that boys would not have the right to claim instruction in the alternative subjects, the option of taking up these subjects resting with the authorities of the Schools.

The motion was then put to the vote and carried by a large majority.

326. A letter from Miss Adams, Head Mistress, La Martinière College for Girls, having been read, the President proposed that French be accepted as a second Language for female candidates at the B. A. examination.

BENGAL SECRETARIAT

Babu Asutosh Mukhopadhyay seconded the motion.

Mr. A. M. Bose proposed as an amendment that the words "German or an Indian Vernacular" be added after the word French.

The President ruled that the amendment could not be accepted, as previous notice had not been given.

The motion was then put to the vote and carried unanimously.

327. The President having stated that he would leave Calcutta on furlough early in April, Babu Asutosh Mukhopadhyay proposed that Mr. Tawney be elected President for the remainder of April and for the year 1892-93.

The motion was carried by acclamation.

328. The following gentlemen were proposed as Representatives in the Syndicate for the year 1892-93 :—

Charles H. Tawney, Esq., C. I. E.
Babu Asutosh Mukhopadhyay, F.R.A.S., F. R. S. E.
The Hon'ble Mahendralal Sircar, M. D., C. I. E.
C. E. Buckland, Esq., C. S.
Nawab Abdool Luteef, Bahadur, C. I. E.
A. Pedler, Esq., F. C. S.
A. M. Bose, Esq.
W. Griffiths, Esq.
Babu Kalicharan Banerjee.

A ballot having been taken, the following gentlemen were declared duly elected :—

Charles H. Tawney, Esq., C. I. E.
Babu Asutosh Mukhopadhyay, F.R.A.S., F. R. S. E.
The Hon'ble Dr. Mahendralal Sircar, M. D., C. I. E.
C. E. Buckland, Esq., C. S.
A. M. Bose, Esq.

(Confirmed), A. M. NASH,
A. CROFT, *Registrar.*
President.

MINUTES

OF THE

FACULTY OF ENGINEERING

FOR THE YEAR 1891-92.

No. 5.

THE 29TH MARCH, 1892.

Present :

THE HON'BLE SIR ALFRED CROFT, K.C.I.E., *in the Chair.*

THE HON'BLE MAHENDRALAL SIRCAR, M.D., C.I.E.
J. S. SLATER, ESQ.
C. W. ODLING, ESQ.
J. H. GILLILAND, ESQ.
DR. W. KING, F.C.S.
J. H. APJOHN, ESQ.
C. LITTLE, ESQ.
A. MACDONELL, ESQ.

329. Read the report of the Sub-Committee appointed by the Faculty at the meeting held on the 26th January to consider whether a special Course for Mining Engineers might not with advantage be introduced into the Examination for Honours in Engineering, either as an additional or as an alternative subject.

RESOLVED—

(i.) That the Faculty recommend to the Syndicate that the following revised rules for the Examination for Honours in Engineering be adopted :—

1. An examination for Honours in Engineering shall be held annually in Calcutta, commencing at such time as the Syndicate shall determine, the date to be notified approximately in the Calendar for the year.

A candidate may be examined in one or more of the following subjects :—

I. Civil Engineering.
II. Mining Engineering.
III. Electrical Engineering.

2. Any candidate who has passed in that or any previous year, the examination for the degree of "Bachelor in Engineering" or for a "Licence in Engineering" shall be eligible for admission to the examination for Honours.

3. Every candidate shall send in his application to the Registrar at least three months before the date fixed for the commencement of the examination.

4. A fee of rupees one hundred shall be payable by each candidate, and no candidate shall be admitted until he has paid this fee to the Registrar. A candidate who fails to pass or to present himself for examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent examinations on payment of a like fee of rupees one hundred on each occasion.

5. The subjects of examination are defined as follows :—

I. CIVIL ENGINEERING.

(*a*).—MATHEMATICS.

(1.) Statics. The composition and resolution of forces acting in one plane on a particle or rigid body. Moments. Bending moments. Conditions of equilibrium of a particle or rigid body acted on by forces in one plane. Force diagram of a system of forces in equilibrium. Meaning of virtual work and work done by a force. Applications of the above to the solution of problems (the candidate to be allowed the option of adopting the graphic method of solution). Equilibrium of constrained bodies and the simple machines. Determination of centroids. Friction. The funicular polygon. The catenary. Application to roofs and bridges.

(2.) Dynamics. *Kinematics.* Velocity and acceleration, uniform and variable. Angular velocity. Numerical value of velocity or acceleration dependent on units of time and length. Relative velocities and accelerations. Composition and resolution of velocities and accelerations. Formulæ connecting time and distance described. Velocity and acceleration.

Kinetics. Newton's laws of motion, especially the scholium to the third law, with applications and illus-

trations of the same in the working of examples. The doctrine of the dimensions of physical quantities. Relation between force, mass moved, and acceleration produced. Attwood's machine. Motion of projectiles in vacuo. Direct impact of bodies. Coefficient of restitution. Constrained motion of bodies sliding down smooth curves. The doctrine of the simple harmonic motion, with application to the pendulum. Uniform motion in a circle. Conical pendulum. The principles of work and energy. Conservation of energy. The motion of a rigid body in two dimensions, in particular round a fixed horizontal axis under the action of gravity. The compound pendulum. The ballistic pendulum. Moments of inertia.

(3.) Geometrical Optics. The reflexion and refraction of light. Mirrors, prisms, lenses. The formation of images. The microscope, the telescope, and Hadley's sextant. The spectrum, the spectroscope.

(4.) Spherical Trigonometry. Euclid, Book XI. propositions 1—21. Elementary formulæ for the trigonometrical functions of the parts of a triangle. Napier's analogies. Gauss's theorems. The solution of triangles.

(b).—ENGINEERING.

(1.) Applied Mechanics.
(2.) Hydraulics.
(3.) Theory and practice of building. Properties of building materials. Road, railway, canal, and river engineering.

(c).—GEODESY.

General principles of surveying, with the theory and use of instruments used in surveying. Measurement of base lines with corrections for level and temperature. Reduction of angles to the plane of the horizon. Reduction to the centre. Spherical excess. Method of distributing errors. Calculation of sides of triangles by the method of chords, by Legendre's theorem, or by spherical trigonometry. Determination of latitudes, longitudes, and azimuths. Heights of stations and terrestrial refraction. Measurement of arcs of latitude and longitude. Determination of the figure of the earth by geodetic measurement and by the pendulum.

The examination shall be both written and oral; the written examination shall be conducted by means of printed papers in each of the following subjects :—

(1.) Statics and Optics.
(2.) Dynamics and Spherical Trigonometry.
(3.) Geodesy.
(4.) Do.
(5.) Applied Mechanics.
(6.) Do. do.
(7.) Hydraulics.
(8.) Do.
(9.) Practice of Building.
(10.) Do. do.

II. MINING ENGINEERING.

(*a.*) Mathematics, as in the course for Civil Engineering.

(*b.*) Electricity in its application to Mining, with special reference to electric bell signalling, electric light installation, and electric transmission of power under ground.

(*c.*) Principles of Mining, together with a knowledge of the Machinery used in Mining.

Preliminary research. Trenching. Costeaning, &c. Deep boring, and apparatus employed. Tools used in various mining operations. Methods used in ventilating, lighting, and draining mines. Sinking of shafts. Driving levels, &c., and the methods adopted for protecting them by timbering, masonry, &c. Tubbing. Exploiting. The different systems used in working excavations, &c., and the methods employed for securing them while kept open. Management of shafts for hoisting, travelling, and ventilation purposes, and the methods adopted for the prevention of accidents. Management of underground roads, carriage, hauling and transport of minerals, &c. Mechanical preparation and dressing of ores. Different methods of working coal, &c.

(*d.*) Geology and Mineralogy.

Geology.—Petrology ; Architectonic Geology ; General Geology of India, with a special knowledge of the Gandhwana system, Transition series, and the Metamorphic series.

Mineralogy.—Practical determination of minerals.

(*e.*) *Metallurgy*, including the treatment and analysis of coal, the knowledge of the candidate to be tested practically.

Physical properties of metals.—Testing machines ; influence of impurities on the properties of iron and copper.

Alloys. Effect of temperature changes on metals and alloys, with special reference to steel ; annealing, hardening, tempering.

Fuel.—Classification ; manufacture of coke ; Wilson's gas producer ; water gas ; absolute, specific, and pyrometric heating power ; assay of coal ; Wright's calorimeter.

Materials.—Ores ; fluxes ; slags ; oxidising and reducing agents ; calculation of furnace charges.

Furnaces.—Hearths ; for roasting and refining and liquation ; shaft furnaces ; iron blast-furnace, Rachette, Pilz, Cupola ; reverberatory furnaces ; puddling-furnace, furnaces used in the smelting for copper and tin, cupellation, closed-vessel furnaces. Deville's blast-furnace, furnaces used in the reduction of blende and cinnabar, and in the manufacture of cement steel, the converter. Means of supplying air : chimneys, blowing engines, Cowper's and Whitwell's stoves.

Metallurgical processes.—Classification ; outlines of typical processes : blast-furnace process ; puddling Dank's furnace ; Siemens' open hearth ; Siemens-Martin ; Bessemer, basic process ; Darby's recarburisation process ; tungsten steel, mitis metal. The Idria process. Tin smelting. Extraction of zinc by the Belgian and Silesian methods. Heroult's aluminium process. Welsh process of extracting copper from copper pyrite. Lead smelting, Flintshire. Extraction of silver from lead, Parkes, Patinson, Cupellation. Concentration of gold in batteries, modern pan amalgamation. Augustin's wet process as practised in America ; Plattner's chlorine process. Methods of producing sound castings.

General Considerations.—Capital and labour ; causes of failure.

The examination shall be both written and oral ; the written examination shall be conducted by means of printed papers in each of the following subjects :—

(1.) Statics and Optics.
(2.) Dynamics and Spherical Trigonometry.
(3.) Electricity.
(4.) Geology.
(5.) Do.
(6.) Mineralogy.
(7.) Mining.
(8.) Do.
(9.) Metallurgy.
(10.) Do.

III. ELECTRICAL ENGINEERING.

(*a.*) *Theoretical.*—A knowledge of the principles of Electricity and Magnetism necessary for the proper understanding of the processes and instruments used in the following divisions of the subjects :—

Telegraphy and allied subjects.

Lines.—Survey of proposed route. Preparation of specifications for material and instruments. Tests, mechanical and electrical, to be applied to material. Erection and maintenance of line. Tests of insulation, resistance, capacity of line. Testing of insulators. Faults, their prevention and localisation.

Office.—Its construction and arrangement. Batteries and instruments, their construction, maintenance and testing.

Different systems of telegraphy. Methods for increasing the carrying power of lines. Duplex, quadruplex, and multiplex telegraphy.

Cables.—Submarine and river, their construction, laying, maintenance, working, and testing.

Application of telegraphy, and other electrical apparatus to railway working.

Earth currents and other disturbances in working Telephones and Microphones. Different forms in practical use. Laying of lines, aerial and underground. Prevention of disturbances from electrical installations. Central exchanges. Lightning conductors and guards, their

construction and application to houses, telegraph offices and lines, and cables.

(*b.*) *Electric Lighting and Transmission of Power.*—The electromagnet, its construction and theory. The relation between magnetising current, magnetism, and induction, as experimentally determined. Application of these results to the dynamos.

Dynamos.—Preparation of designs for dynamos required for a specified purpose and output. Theory of the dynamo, direct and alternate. Approved types of dynamos according to recent practice. Characteristic curves. Determination of efficiency of dynamos. Lamps. Construction and working of arc lamps of approved type. Incandescent lamps. Arrangement of arc and incandescent lamps in circuit. Photometry. Measurement of efficiency of lamps.

Central Stations.—Use of water power in prime motor. Boilers and engines best suited for proposed work. Tests of their efficiency. Leading methods of central station, distribution of electrical energy by direct and alternate currents. Overhead and underground mains. Methods of insulation adopted in both. Loss of energy in mains. Relation of diameter of conductor to current carried Devices for regulation of electromotive force and current. Measuring instruments, switches, fuses used in a Central Station.

Batteries.—Secondary batteries, their construction, theory, maintenance, and use in the distribution of electricity

Transformers, their construction, theory, and use in the distribution of electricity.

Transmission of power by means of electricity. Electro-motors. Theory and construction of electromotors, direct and alternate. Their use in railways, tramways, and in general machinery. Arrangement of line between generating station and place of distribution.

Electric Welding.

(*c.*) *Electro-metallurgy.*

Electro-deposition of metals and reduction of ores. Construction of dynamos specially designed for these purposes.

(*d.*) *Instruments.*

Theory of electrical measurements. The construction and use of electrical standards of Potential, Resistance, Capacity and Inductance. Galvanometers and other instruments required in the use of these standards. Commercial instruments, their theory, construction, use, and comparison with standards. Induction Coils.

(*e.*) *Dynamometers*, their theory and use in the testing of the efficiency of dynamos and motors.

(*f.*) A practical paper to test the knowledge of the candidate in the methods of Electrical Measurement.

(*g.*) *Mathematics*, as in the course for Civil Engineering.

The examination shall be both written and oral; the written examination shall be conducted by means of papers in each of the following subjects :—

(1.) Statics and Optics.
(2.) Dynamics and Spherical Trigonometry.
(3.) Theory of Electricity and Magnetism.
(4.) Telegraphy.
(5.) Do.
(6.) Electric Lighting and Transmission of Power.
(7.) Do. do.
(8.) Do. do.
(9.) Electro-metallurgy and electrical instruments.
(10.) Practical Examination in Electrical Measurements.

(*ii.*) That the Faculty recommend to the Syndicate that a student who has passed the B. A. examination in the B. course be admitted to the F. E. examination after two years' study in a school of Engineering affiliated to the University.

330. The Faculty then proceeded to elect a President and Representative in the Syndicate for the year 1892-93.

RESOLVED—

That Mr. Odling be elected President and Representative in the Syndicate for the year 1892-93.

331. The Registrar having submitted the report of the Committee appointed by the Faculty at the meeting held on the 15th December, 1890, to consider a revised course in Natural Science for the B. E. and L. E. examinations, it was

RESOLVED—

That the consideration of the report be deferred, and that Committees be appointed to consider the definitions of the other subjects contained in Appendix A. to the Resolution of the Government of Bengal, forwarded by the Director of Public Instruction, Bengal, with his letter No. 3319, dated the 26th May, 1891, and that the Committees consist of the following gentlemen :—

For the Engineering subjects.

J. S. Slater, Esq.
C. W. Odling, Esq.
J. H. Apjohn, Esq.

For Mathematics.

J. S. Slater, Esq.
J. H. Gilliland, Esq.
C. Little, Esq.
A. Macdonell, Esq.

(Confirmed), A. M. NASH,
A. CROFT, *Registrar.*
Chairman.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 15.

THE 9TH APRIL, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D L,

Vice-Chancellor, in the Chair.

CHARLES H TAWNEY, ESQ., C I E
THE HON'BLE SIR ALFRED CROFT, K.C.I.E.
BABU MOHINIMOHAN RAY.
J. S SLATER, ESQ.
E. A BIRCH, ESQ, M D.
RAI TARAPRASANNA RAY, BAHADUR, F.C S.
BABU ASUTOSH MUKHOPADHYAY, F.R A.S, F.R S.E

332. The Minutes of the meeting of the Syndicate, held on the 12th March, were read and confirmed.

333. Read the Minutes of the Faculty of Medicine dated the 22nd March.

ORDERED—

To be recorded

334. Read the Minutes of the Faculty of Law dated the 24th March.

ORDERED—

To be recorded.

335. Read the Minutes of the Faculty of Engineering dated the 29th March.

RESOLVED—

That the Syndicate recommend to the Senate that the following revised rules for the examination for Honours in Engineering be substituted for paras. 1—6 of the Regulations for Honours in Civil Engineering in page 71

of the Calendar for 1892, and that the word "Civil" be omitted from the heading of the Regulations :—

1 An examination for Honours in Engineering shall be held annually in Calcutta, commencing at such time as the Syndicate shall determine, the date to be notified approximately in the Calendar for the year.

A candidate may be examined in one or more of the following subjects:—

I. Civil Engineering.
II. Mining Engineering.
III. Electrical Engineering.

2. Any candidate who has passed in that or any previous year the examination for the degree of "Bachelor in Engineering" or for a "Licence in Engineering" shall be eligible for admission to the examination for Honours.

3. Every candidate shall send in his application to the Registrar at least three months before the date fixed for the commencement of the examination

4. A fee of rupees one hundred shall be payable by each candidate, and no candidate shall be admitted until he has paid this fee to the Registrar. A candidate who fails to pass or to present himself for examination, shall not be entitled to claim a refund of the fee. A candidate may be admitted to one or more subsequent examinations on payment of a like fee of rupees one hundred on each occasion.

5. The subjects of examination are defined as follows :—

I. CIVIL ENGINEERING.

(a).—MATHEMATICS.

(1.) Statics. The composition and resolution of forces acting in one plane on a particle or rigid body Moments. Bending moments. Conditions of equilibrium of a particle or rigid body acted on by forces in one plane. Force diagram of a system of forces in equilibrium. Meaning of virtual work and work done by a force. Applications of the above to the solution of problems (the candidate to be allowed the option of adopting the graphic method of solution). Equilibrium of constrained bodies and the simple machines. Determination of cen-

troids. Friction. The funicular polygon. The catenary. Application to roofs and bridges.

(2.) Dynamics. *Kinematics.* Velocity and acceleration, uniform and variable. Angular velocity. Numerical value of velocity or acceleration dependent on units of time and length. Relative velocities and accelerations. Composition and resolution of velocities and accelerations. Formulæ connecting time and distance described. Velocity and acceleration.

Kinetics. Newton's laws of motion, especially the scholium to the third law, with applications and illustrations of the same in the working of examples. The doctrine of the dimensions of physical quantities. Relation between force, mass moved, and acceleration produced Atwood's machine. Motion of projectiles in vacuo. Direct impact of bodies. Coefficient of restitution. Constrained motion of bodies sliding down smooth curves. The doctrine of the simple harmonic motion, with application to the pendulum. Uniform motion in a circle. Conical pendulum. The principles of work and energy. Conservation of energy. The motion of a rigid body in two dimensions, in particular round a fixed horizontal axis under the action of gravity. The compound pendulum. The ballistic pendulum. Moments of inertia.

(3.) Geometrical Optics. The reflexion and refraction of light. Mirrors, prisms, lenses. The formation of images. The microscope, the telescope, and Hadley's sextant. The spectrum, the spectroscope.

(4.) Spherical Trigonometry. Euclid, Book XI., propositions 1—21. Elementary formulæ for the trigonometrical functions of the parts of a triangle. Napier's analogies. Gauss's theorems. The solution of triangles.

(b).—ENGINEERING.

(1.) Applied Mechanics.

(2.) Hydraulics.

(3.) Theory and practice of building. Properties of building materials. Road, railway, canal, and river engineering.

(c).—GEODESY.

General principles of surveying, with the theory and use of instruments used in surveying. Measurement of

base lines with corrections for level and temperature. Reduction of angles to the plane of the horizon. Reduction to the centre. Spherical excess. Method of distributing errors. Calculation of sides of triangles by the method of chords, by Legendre's theorem, or by Spherical Trigonometry. Determination of latitudes, longitudes, and azimuths. Heights of stations and terrestrial refraction. Measurement of arcs of latitude and longitude. Determination of the figure of the earth by geodetic measurement and by the pendulum

The examination shall be both written and oral; the written examination shall be conducted by means of printed papers in each of the following subjects :—

(1.) Statics and Optics.
(2.) Dynamics and Spherical Trigonometry.
(3.) Geodesy.
(4.) Do.
(5.) Applied Mechanics.
(6.) Do. do.
(7.) Hydraulics.
(8.) Do.
(9.) Practice of Building.
(10.) Do. do.

II. MINING ENGINEERING.

(*a.*) Mathematics, as in the course for Civil Engineering.

(*b.*) Electricity in its application to Mining, with special reference to electric bell signalling, electric light installation, and electric transmission of power underground.

(*c.*) Principles of Mining, together with a knowledge of the Machinery used in Mining.

Preliminary research. Trenching. Costeaning, &c. Deep boring, and apparatus employed. Tools used in various mining operations. Methods used in ventilating, lighting, and draining mines. Sinking of shafts. Driving levels, &c., and the methods adopted for protecting them by timbering, masonry, &c. Tubbing. Exploiting. The different systems used in working excavations, &c., and the methods employed for securing them while kept open. Management of shafts, for hoisting,

travelling, and ventilation purposes, and the methods adopted for the prevention of accidents. Management of underground roads, carriage, hauling and transport of minerals, &c. Mechanical preparation and dressing of ores. Different methods of working coal, &c.

(*d.*) Geology and Mineralogy.

Geology.—Petrology ; Architectonic Geology ; General Geology of India, with a special knowledge of the Gandhwana system, Transition series, and the Metamorphic series.

Mineralogy.—Practical determination of minerals.

(*e.*) *Metallurgy*, including the treatment and analysis of coal. The knowledge of the candidate to be tested practically.

Physical properties of metals.—Testing machines ; influence of impurities on the properties of iron and copper.

Alloys.—Effect of temperature changes on metals and alloys, with special reference to steel ; annealing, hardening, tempering.

Fuel.—Classification ; manufacture of coke ; Wilson's gas producer ; water gas ; absolute, specific, and pyrometric heating power ; assay of coal ; Wright's calorimeter.

Materials.—Ores ; fluxes ; slags ; oxidising and reducing agents ; calculation of furnace charges.

Furnaces.—Hearths ; for roasting and refining and liquation ; shaft furnaces ; iron blast-furnace, Rachette, Pilz, Cupola ; reverberatory furnaces ; puddling-furnace, furnaces used in smelting for copper and tin, cupellation, closed-vessel furnaces. Deville's blast-furnace, furnaces used in the reduction of blende and cinnabar, and in the manufacture of cement steel, the converter. Means of supplying air : chimneys, blowing engines, Cowper's and Whitwell's stoves.

Metallurgical processes.—Classification ; outlines of typical processes : blast-furnace process ; puddling Dank's furnace ; Siemens' open hearth ; Siemens-Martin ; Bessemer, basic process ; Darby's recarburisation process ; tungsten steel, mitis metal. The Idria process. Tin smelting. Extraction of zinc by the Belgian and Silesian

methods. Heroult's aluminium process. Welsh process of extracting copper from copper pyrite. Lead smelting, Flintshire. Extraction of silver from lead, Parkes, Patinson, Cupellation. Concentration of gold in batteries, modern pan amalgamation. Augustin's wet process as practised in America ; Plattner's chlorine process. Methods of producing sound castings.

General Considerations.—Capital and labour ; causes of failure.

The examination shall be both written and oral ; the written examination shall be conducted by means of printed papers in each of the following subjects :—

(1.) Statics and Optics.
(2.) Dynamics and Spherical Trigonometry
(3.) Electricity.
(4.) Geology.
(5.) Do.
(6.) Mineralogy.
(7.) Mining.
(8.) Do.
(9.) Metallurgy.
(10.) Do.

III. ELECTRICAL ENGINEERING.

(a.) Theoretical.—A knowledge of the Principles of Electricity and Magnetism necessary for the proper understanding of the processes and instruments used in the following divisions of the subjects.

(b.) Telegraphy and allied subjects.

Lines.—Survey of proposed route. Preparation of specifications for materials and instruments. Tests, mechanical and electrical, to be applied to materials. Erection and maintenance of line. Tests of insulation, resistance, capacity of line. Testing of Insulators. Faults, their prevention and localisation.

Office.—Its construction and arrangement. Batteries and instruments, their construction, maintenance and testing.

Different systems of telegraphy. Methods for increasing the carrying power of lines. Duplex, quadruplex, and multiplex telegraphy.

Cables.—Submarine and river, their construction, laying, maintenance, working, and testing.

Application of telegraphy, and other electrical apparatus to railway working.

Earth currents and other disturbances in working Telephones and Microphones. Different forms in practical use. Laying of lines, aerial and underground. Prevention of disturbances from electrical installations. Central exchanges. Lightning conductors and guards, their construction and application to houses, telegraph offices and lines, and cables.

(c.) Electric Lighting and Transmission of Power.—The electro-magnet, its construction and theory. The relation between magnetising current, magnetism, and, induction, as experimentally determined. Application of these results to the dynamos.

Dynamos.—Preparation of designs for dynamos required for a specified purpose and output. Theory of the dynamo, direct and alternate. Approved types of dynamos according to recent practice. Characteristic curves. Determination of efficiency of dynamos. Lamps. Construction and working of arc lamps of approved type. Incandescent lamps. Arrangement of arc and incandescent lamps in circuit. Photometry. Measurement of efficiency of lamps.

Central Stations.—Use of water power in prime motor. Boilers and engines best suited for proposed work. Tests of their efficiency. Leading methods of central station, distribution of electrical energy by direct and alternate currents. Overhead and underground mains. Methods of insulation adopted in both. Loss of energy in mains. Relation of diameter of conductor to current carried. Devices for regulation of electromotive force and current. Measuring instruments, switches, fuses used in a Central Station.

Batteries.—Secondary batteries, their construction theory, maintenance, and use in the distribution of electricity.

Transformers, their construction, theory, and use in the distribution of electricity.

Transmission of power by means of electricity. Electro-motors. Theory and construction of electro-mo-

tors, direct and alternate. Their use in railways, tramways, and in general machinery Arrangement of line between generating station and place of distribution.

Electric Welding.

(d) Electro-metallurgy.

Electro-deposition of metals and reduction of ores. Construction of dynamos specially designed for these purposes.

(e.) Instruments.

Theory of electrical measurements. The construction and use of electrical standards of Potential, Resistance, Capacity and Inductance. Galvanometers and other instruments required in the use of these standards. Commercial instruments, their theory, construction, use, and comparison with standards. Induction Coils.

(f.) Dynamometers, their theory and use in the testing of the efficiency of dynamos and motors.

(g.) A practical paper to test the knowledge of the candidate in the methods of Electrical Measurement.

(h.) Mathematics, as in the course for Civil Engineering.

The examination shall be both written and oral; the written examination shall be conducted by means of printed papers in each of the following subjects :—

(1.) Statics and Optics.
(2.) Dynamics and Spherical Trigonometry.
(3) Theory of Electricity and Magnetism.
(4.) Telegraphy.
(5.) Do.
(6.) Electric Lighting and Transmission of Power.
(7.) Do. do.
(8.) Do. do.
(9.) Electro-Metallurgy and electrical instruments.
(10.) Practical Examination in Electrical Measurements.

RESOLVED ALSO—

(i.) That the words "A student who has passed the B. A. examination in the B. Course shall be admitted to the

F. E. examination after two years' study in a school of Engineering affiliated to the University" be added at the end of para. 2 of the Regulations for the First Examination in Engineering.

(ii.) That a copy of the Resolution be forwarded to the Director of Public Instruction, Bengal, for information

336. Read the Proceedings of the Board of Studies in Mathematics dated the 2nd April.

RESOLVED—

That the corrected list of text-books be published in the *Gazette*, and that a copy be sent to all Affiliated Colleges.

337. The Registrar stated that a day should be fixed for holding the Annual Meeting of the Senate.

RESOLVED—

That the Annual Meeting of the Senate be held on the 23rd April.

338. Read the Report of the Committee appointed to revise the list of centres for holding the examinations in Arts.

RESOLVED—

That the following revised list of centres be published in the *Gazette*, and that a copy of the list be sent to the Heads of all Colleges and Schools :—

ENTRANCE.—Agra, Barisal, Berhampur, Bhagalpur, Burdwan, Chittagong, Cooch-Behar, Dacca, Darjeeling, Debrugarh, Gauhati, Hughli, Indore, Jabalpur, Jaffna, Kandy, Katak, Krishnagar, Lahore, Midnapur, Nagpur, Patna, Rampur-Baulia, Ranchi, Rangoon, and Sylhet.

F. A.—Barisal, Berhampur, Bhagalpur, Burdwan, Chittagong, Cooch-Behar, Dacca, Hughli, Jabalpur, Jaffna, Kandy, Katak, Krishnagar, Midnapur, Nagpur, Patna, Rampur-Baulia, and Rangoon.

B. A.—Dacca, Hughli, Jabalpur, Kandy, Katak, Nagpur, Patna, and Rangoon.

339. Read the following report of the Board of Examiners for the L. M. S. Examinations :—

"FROM

THE BOARD OF EXAMINERS
FOR THE L. M. S. EXAMINATION

TO

THE REGISTRAR,
CALCUTTA UNIVERSITY.

Dated the 5th April, 1892.

SIR,

We have the honour to submit for the approval of the Vice-Chancellor and Syndicate the results of the L.M.S examinations.

The number of candidates registered for the Preliminary Scientific L.M S. examination was 44, of whom 29 passed, 13 failed, and 2 were absent.

The number of candidates registered for the First L M.S. examination was 35, of whom 20 passed, 14 failed, and 1 was absent.

The number of candidates registered for the Combined Preliminary Scientific and First L.M.S. examination was 3, of whom 1 passed and 2 failed in the First L.M.S. examination, but passed the Preliminary Scientific examination.

The number of candidates registered for the Second L.M S. examination was 33, of whom 19 passed and 14 failed.

The examinations have been conducted in accordance with the instructions aid down for our guidance in our letter of appointment.

We have the honour to be
Sir,
Your most obedient Servants,

(Sd.) EDWARD A. BIRCH.
(,,) O'CONNELL RAYE.
(,,) J. H. TULL WALSH.
(,,) J. F. P. McCONNELL, M.D.
(,,) TARAPRASANNA RAY.
(,,) HIRALAL GHOSH.

The Registrar reported that in anticipation of the orders of the Syndicate he had published the names of the successful candidates in the *Gazette*.

RESOLVED—

That the action of the Registrar be approved.

The following are the names of the successful candidates :—

PRELIMINARY SCIENTIFIC, L. M. S.

In alphabetical order.

Baksi, Rasbihari	...	Medical College
Barat, Syamlal	...	Ditto
Basak, Baidyanath	...	Ditto

Basu, Sureschandra	...	Medical College.
Bhattacharyya, Surendranath	...	Ditto
„ Susilchandra	...	Ditto
Biswas, Hemchandra	...	Ditto
„ Saratchandra	...	Ditto
Chattopadhyay, Gopalchandra		Ditto
Chaudhuri, Debendranath	...	Ditto
Das, Harendrakumar	...	Ditto
„ Isanchandra	...	Ditto
Datta, Bipinbihari	...	Ditto
„ Saratchandra	...	Ditto
De, Bipinchandra	...	Ditto
D'Sylva, Elphinstone	...	Ditto
Ghosh, Purnachandra	...	Ditto
Ghoshal, Chandicharan	...	Ditto
Gupta, Bipinbihari	...	Ditto
Haldar, Manibhushan	...	Ditto
Karmakar, Taraknath	...	Ditto
Majumdar, Kedarnath	...	Ditto
Pal, Ratanchandra	...	Ditto
Ray, Abinaschandra	...	Ditto
„ Adharchandra	...	Ditto
„ Nepalchandra	...	Ditto
Sanyal, Bankimchandra	...	Ditto
Sen, Jamini	...	Ditto
„ Satischandra	...	Ditto
„ Satyendranath	...	Ditto
„ Syamacharan	...	Ditto
Sinha, Surendranath	...	Ditto

FIRST L.M.S.

In alphabetical order.

Bandyopadhyay, Charuchandra		Medical College
„ Haricharan	...	Ditto
„ Haritaran	...	Ditto
Basu, Bimanbihari	...	Ditto
„ Sureschandra	...	Ditto
Chaliha, Lakshmiprasad	...	Ditto
Das, Saradaprasad	...	Ditto
Datta, Priyanath	...	Ditto
De, Satischandra	...	Ditto
Fox, Helen A.	...	Ditto
Gangopadhyay, Kalidas	...	Ditto
Mandal, Satischandra	...	Ditto
Mukhopadhyay, Haripada	...	Ditto
„ Satischandra	...	Ditto
Ray, Jogindragopal	...	Ditto
„ Saradakanta	...	Ditto
Sadhukhan, Phakirchandra	...	Ditto
Sanyal, Nisinath	...	Ditto
Sarkar, Nakulchandra	...	Ditto
„ Sureschandra	...	Ditto
Sen, Jyotischandra	...	Ditto

SECOND L. M. S.

In alphabetical order.

Bandyopadhyay, Charuchandra		Medical College
„ Sasibhushan...		Ditto
Basak, Syamalkrishna	...	Ditto
Basu, Nripendranath	...	Ditto
Das, Kedarnath	...	Ditto
Ghosh, Mahendranath	...	Ditto
Ghoshal, Binodbihari	...	Ditto
„ Rajendranath	...	Ditto
Gupta, Bholanath	...	Ditto
„ Manomohan	...	Ditto
Kumar, Prasannalal	...	Ditto
Majumdar, Nagendranath	...	Ditto
Mitra, Manindralal	...	Ditto
Mukhopadhyay, Surendranath		Ditto
Nandi, Baikunthakumar	...	Ditto
Ray, Umacharan	...	Ditto
Sanyal, Jajneswar	...	Ditto
Sarkar, Surendranath	...	Ditto
Sen, Mahendranath	...	Ditto

340. The Registrar submitted for orders of the Syndicate the correspondence that passed between him and Babu Ashutosh Mookerjea, one of the Examiners in English for the recent F. A. Examination.

RESOLVED—

That Babu Ashutosh Mookerjea be requested to return all the letters written to him by the Registrar.

341. Read a letter from the Principal, Medical College, Calcutta, suggesting the assimilation of the L. M. S. Regulations to those of the qualifying Colleges in England, under which a student who fails at his final pass examination is referred back to his studies for a period varying from 3 to 12 months, when he is re-examined in the subject or subjects in which he has been rejected, and proposing the adoption of certain rules to give effect to the suggestion.

RESOLVED—

That the letter be referred to the Faculty of Medicine.

342. Read a D. O. letter from the Hon'ble Sir Alfred Croft, K.C.I.E., requesting to be informed whether a student who after passing the Entrance examination joins an Affiliated Institution in June 1890, reads there until the 30th November 1891, and then withdraws his name on

account of ill health, should re-join the institution in March or in June 1892, in order to complete the requirements of a second full session.

RESOLVED—

That the Director of Public Instruction, Bengal, be informed that the student must enter an Affiliated College in June.

343. Read a letter from the Inspector of Schools, Presidency Circle, forwarding copy of a letter from the Head Master, Zila School, Hazaribagh, stating the circumstances under which Mathura Prasad and Bhagabat Sahai, candidates at the recent Entrance examination, obtained transfer to the Gaya Sahebganj School, and suggesting that if the candidates pass the examination they should be gazetted as "private students."

RESOLVED—

That the letter be brought up again at the next meeting.

344. Read a letter from the Director of Public Instruction, Bengal, stating in reply to this Office letter No. 2321, dated the 14th March 1892, that in his opinion the proposed rule requiring a private candidate at the Entrance examination to appear at the Test examination of the nearest Government or other High School, his certificate of having passed the examination being forwarded by the Head Master to the local Inspector of Schools for his countersignature and transmission to this office, would be still subject to the risk arising from false personation, unless it is further required that some person known to the Head Master of the School at which the Test examination was to take place, should attend on the first day of the examination in order to identify the candidate.

ORDERED—

To be deferred.

345. Read a letter from the Director of Public Instruction, Bengal, forwarding for orders of the Syndicate copy of a letter from the Principal, Tejnarayan College, Bhagalpur, together with an original Transfer Certificate

of a student of the College, named Mahendranath Ray, in which the figures have been fraudulently altered, and also inviting attention to the suspicious part played by another student of the College in the Law Department, named Bisweswar Ghosh, as detailed in the Principal's letter.

Read also a letter from the Principal, Raj College, Burdwan, returning with his remarks the explanation furnished by Narayandas Ray regarding the alterations in his Transfer Certificate.

RESOLVED—

(1.) That the Principal, Tejnarayan College, be informed that Mahendranath Ray will not be allowed to appear at the University Examinations until 1895; and that the evidence against Bisweswar Ghosh is not sufficient to justify the Syndicate in awarding any punishment.

(2.) That the Principal, Burdwan Raj College, be informed that the records of the College appear to have been so carelessly kept that the evidence against Narayandas Ray is insufficient to establish his guilt.

346. Read a letter from the Director of Public Instruction, Bengal, having reference to the correspondence that passed between the Government of Bengal and the University on the subject of holding the London University examinations in India (University Minutes for 1881-82, pp. 138-145) and stating that should the Syndicate consider the question afresh on the understanding that no certificate of having gone through a regular course of study will be required of candidates for the London examinations, he would submit an application to the Government of Bengal enquiring whether the Government would be willing to request the London University to hold its examinations in Calcutta or other places in India.

RESOLVED—

That the Director of Public Instruction, Bengal, be informed that considering the fact that the requirement of two languages besides English, one of which must be Latin or Greek, will always operate to prevent any but a small number of students from appearing at the examinations of the London University, the Syndicate have no longer any objection to his proposal.

347. Read a letter from K. Deighton, Esq, intimating his intention of editing a series of plays from the Minor Elizabethan Dramatists, and requesting to be informed of the opinion of the Syndicate as to the likelihood of such plays being set for the University examinations.

RESOLVED—

That it is not desirable that the works of the Minor Elizabethan Dramatists be introduced as text-books for the F. A. and B. A examinations

348. Read a letter from the Officiating Deputy Secretary to the Government of India, in the Home Department, intimating that, as requested in this Office letter No. 2308, dated the 10th March 1892, the Governor-General in Council is pleased to sanction the affiliation of the Midnapur College to the University in Law.

ORDERED—

To be recorded.

349. Read a letter from the Officiating Secretary to the Government of India, in the Home Department, intimating that the Governor-General in Council approves the changes in the University Regulations enumerated in this Office letter No. 2317, dated the 11th March 1892.

ORDERED—

To be recorded.

350. Read endorsements from the Principal, City College, forwarding applications from Anukulchandra Ray and Manindralal Sinha praying that they may be allowed to appear at the next B L. examination after attending lectures from June to November 1892.

RESOLVED—

That the Principal, City College, be informed that Anukulchandra Ray and Manindralal Sinha must attend lectures for a full year.

351. Read a letter from the Principal, Hislop College, Nagpur, recommending that Govind Wasudeo Bhide may be allowed to join the F. A. class of his College, and forwarding a certificate from the Registrar, Bombay University, stating that he has no objection to

the student being admitted to any of the examinations of this University.

ORDERED—

To be deferred.

352. Read an application from Vinayek Chintamen Pendse, supported by the written permission of the Registrar, Bombay University, praying that he may be admitted to the F. A. examination.

ORDERED—

To be deferred.

353. Read applications from Dattatraya Vethal Saranjame, Bhaskar Vaman Joshi, K. N. Panjankar and Hariballab Parchure, supported by the written permission of the Registrar, Bombay University, praying that they may be allowed to go in for the B. A. examination.

ORDERED—

To be deferred.

354. Read a letter from Messrs. Thacker, Spink & Co. requesting to be informed of the price at which the Calendar for 1892 is to be sold.

RESOLVED—

That the price of the Calendar for 1892 be fixed at Rs. 3-8.

355. Read an application from V. V. Shikhare praying that the lectures attended by him in the Fergusson College may be allowed to count towards his percentage of attendances.

RESOLVED—

That V. V. Shikhare be informed that lectures delivered in a College not affiliated to this University cannot be counted.

356. The Registrar submitted the report of the Syndicate for the year 1891-92.

RESOLVED—

That the Syndicate recommend to the Senate that the report be adopted.

357. The Registrar submitted the accounts of the University for the Financial year ending 31st March 1892.

RESOLVED—

That the accounts be passed.

358. The Registrar submitted the budget for the year 1892-93.

RESOLVED—

That the budget be passed.

359. The following contingent bills for the months of October, November and December 1891, and January, February and March 1892, were passed :—

FEE FUND.

		Rs.	As.	P.
6	Bills, Collector of Stamps for Service labels ...	1,000	0	0
2	„ Collector of Corporation, House, Water, Police and Lighting Taxes	292	8	0
2	„ Do. do. do.	292	8	0
1	Bill Messrs. Thacker, Spink & Co. for Books ...	117	12	0
1	„ Do. do. ...	8	14	0
1	„ Do. for Subscription	12	0	0
2	Bills Do. for Prize Books	200	0	0
2	„ Do. do. ...	200	0	0
1	Bill Do. for Books ...	5	5	0
2	Bills Do Commission on the University Publications...	330	5	0
2	„ Messrs. Newman & Co. for Miscellaneous Printing Work ...	24	12	0
3	„ Do. do. ...	84	12	0
1	Bill Do. do. ...	178	12	0
1	„ Do. do. ...	273	4	0
1	„ Do. do. ...	413	0	0
1	„ Do. for Lithographing Armenian Paper ...	25	0	0
1	„ Secretary, S. P. C. K. Press, for Printing Examination Papers ...	7	13	0
1	„ Babu Haraprasad Sastri, Examination Expenses ...	12	0	0
3	Bills Reporter's Fee for reporting Senate Meetings	75	0	0
1	Bill "Englishman" Press for Advertisement	9	0	0
1	„ Do. do. ...	3	12	0
1	„ "Hindu Patriot" for do. ...	9	8	0
1	„ "Hindu Patriot" for Advertisement	3	4	0
	Carried over Rs. ...	3,579	1	0

		Brought forward Rs ...	3,579	1	0
1	Bill	"Bengali" Press for Advertisement	10	4	0
1	„	"Indian Mirror" for do. ...	5	2	0
1	„	Do. for do. ...	2	2	0
1	„	"Indian Nation" for Advertisement	7	8	0
1	„	Do. do ...	3	0	0
1	„	"Amrita Bazar Patrika" for do....	9	12	0
1	„	Do. do. ...	3	12	0
1	„	"East" do. ...	9	8	0
1	„	"Pioneer" do. ...	9	9	0
1	„	"Reis and Rayyat" do. ...	11	0	0
1	„	Do. do. ...	4	4	0
1	„	"Indian Daily News" do. ...	9	0	0
1	„	"Statesman" do. ...	9	8	0
1		Do. do. ...	4	8	0
1	„	Superintendent of Stationery for Stationery Articles ...	431	12	0
		Postage Stamps	1	4	6
		Receipt Stamps	4	0	0
1	„	Master of the Mint for Medals ...	218	4	0
1	„	Do. do. ...	828	13	10
1	„	Do. do. ...	165	4	0
1	„	Do. difference of the cost of Medals	96	9	6
2	Bills	"Catholic Orphan Press" for Miscellaneous Printing Work	14	8	0
4	„	Do do ...	27	6	0
1	Bill	Do. do ...	9	0	0
1	„	Travelling Expenses ...	4	8	0
1	„	Contingencies do. ...	12	9	0
1	„	Do. do. ...	2	8	6
1	„	Do. do. ...	3	12	0
1	„	Do. do ...	17	12	6
1	„	Do. do. ...	1	14	0
1	„	Matman for new mat ...	11	0	0
1	„	Messrs. Eyre and Spottiswoode for Printing Examination Papers...	5,375	4	3
1	„	Messrs. Harman & Co. for safe custody of gowns ...	50	0	0
1	„	Messrs. Smith, Stanistreet & Co.	3	4	0
1	„	D. D. Mehta, Examination Expenses	2	0	0
1	„	Do. do.	2	2	0
1	„	Mankhan for chairs ...	26	0	0
1	„	Freight paid for Railway parcels ...	221	7	6
1	„	Do. do. ...	273	12	9
1	„	Do. do. ...	133	4	0
1	„	Do. do. ...	36	0	0
1	„	Do. do. ...	53	9	6
		Contribution to the Reserve Fund	16,658	3	9
1	„	Samiruddin tailor for livery ...	25	0	0
1	„	Ticca duftries	6	12	0
		Carried over Rs. ...	28,395	7	7

		Brought forward Rs.	...	28,395	7	7
1	Bill	Ticca duftries	...	6	12	0
1	„	Do.	...	4	2	0
1	„	Ticca men employed for supplying water to examinees	...	2	4	9
1	„	Refund of Fee paid by Charuchandra Basu ...	...	10	0	0
1	„	S. K. Lahiri, for Prize Books	...	100	0	0
1	„	Do. do	...	100	0	0
2	Bills	S. C. Addy for do.	...	200	0	0
2	„	Expenses incurred during the Examinations held at the Presidency College	...	755	2	6
2	„	Do. do.	...	895	8	9
1	Bill	Do. Naini Tal	...	9	7	0
2	Bills	Do. Katak	...	27	6	0
2	„	Do do.	...	30	13	6
1	Bill	Do. Gauhati	...	32	11	6
1	„	Do. Debrugarh	...	22	9	0
1	„	Do. Darjeeling	...	27	6	6
1	„	Do. do.	...	8	9	6
1	„	Do. Mussoorie	...	12	7	0
1	„	Do. do.	...	7	6	6
1	„	Do. Chittagong	...	48	4	9
1	„	Do. do.	...	26	4	0
1	„	Do. Sylhet	...	57	1	6
1	„	Do. Ranchi	...	38	5	3
1	„	Do. Rangoon	...	34	13	0
1	„	Do. do.	...	9	4	0
1	„	Do. Lahore	...	81	3	3
1	„	Do. do.	...	19	5	0
1	„	Do. Jaffna	...	67	9	0
1	„	Do. Simla	...	6	0	0
1	„	Do. do.	...	6	4	0
1	„	Do. Bankura	...	59	8	0
1	„	Do. Bhagalpur	...	42	2	0
1	„	Do. Baulia	...	56	9	0
1	„	Do. Berhampur	...	135	12	3
1	„	Do. Shillong	...	37	2	9
1	„	Do. Krishnagar	...	85	7	0
2	Bills	Do. Barisal	...	253	2	9
1	„	Do. Indore	...	26	6	0
1	„	Do. Cooch Behar	...	80	14	0
1	„	Do. Agra	...	43	12	0
1	„	Do. Midnapur	...	93	13	6
2	„	Do. Patna	...	159	2	6
1	Bill	Do. Dacca	...	292	1	6
1	„	Do. Hughli	...	147	8	0
1	„	Do. Sagar	...	27	1	6
1	„	Do. Nagpur	...	113	3	0
1	„	Do. Akyab	...	8	13	0
1	„	Do. Kandy	...	49	0	4
		Carried over Rs.	...	32,855	6	11

	Brought forward Rs. ...	32,855	6	11			
1	Bill Packerman, for Supplying Packing Cases for sending copy books to moffusil centres	97	8	0			
1	„ J. Callerman for supplying Stamping ink	6	0	0			
1	„ Traill & Co. fors upplying copy books	694	2	0			
1	„ Mr. Booth, passage money ...	250	0	0			
1	„ Superintendent, B. M. Press, for miscellaneous printing work ...	269	4	0			
1	„ Superintendent, Baptist Mission Press, for printing Calendar, (Examination Papers) ...	1,311	10	0			
10	Bills Conveyance Hire to Teachers for superintending the University Examinations held at Dacca ...	120	0	0			
1	Bill, Messrs. Grindlay & Co., freight ...	6	14	11			
1	„ „ T. E. Thomson & Co. for a padlock	10	8	0			
1	„ Chhannoo Duftry for supplying cloth-lined envelopes ...	50	0	0			
1	„ Khoda Baksh Mistry, for repairing furniture	87	11	0	35,759	0	10
	Remuneration.						
	Mr. K. Deighton's remuneration for setting B. A. papers in English	214	4	4			
	Mr. W. Billing's remuneration for conducting the Entrance Examination	472	9	10			
	Dr. K. S. Macdonald's remuneration for conducting the F. A. Examination	789	14	1	1,476	12	3
	Saradaprasad Fund.						
1	Bill, Prize Books	25	0	0			
1	„ Do.	25	0	0	50	0	0
	Radhakanta Fund.						
1	Bill, Master of the Mint, for medals ...				115	2	3
	Herschel Fund.						
1	Bill, Master of the Mint for medals ...				71	13	2
	Hemantakumar Fund.						
1	Bill, Master of the Mint for medals ...				101	14	0
	Carried over Rs.				37,574	10	6

		Brought forward Rs.			37,574	10	6
		Kesabchandra Sen Fund.					
1	Bill,	Master of the Mint for medals ...	113	10 6			
1	„	Messrs. Thacker, Spink & Co. for prize books	80	0 0			
1	„	Prize in money	80	0 0	273	10	6
		Padmavati Fund.					
1	Bill,	Master of the Mint for medals ...			129	14	4
		McCann Fund.					
1	Bill,	Master of the Mint for medals ...			19	7	0
		Peary Chand Fund.					
1	Bill,	Master of the Mint for medals ...			19	7	0
		Ambicacharan Chaudhuri Fund.					
1	Bill,	Messrs. Hamilton & Co. for medal			48	0	0
		Mouat Fund.					
1	Bill,	Master of the Mint for medals ...			113	1	11
		Trevor Fund.					
1	Bill,	Master of the Mint for medals ...			71	7	6
		Prasannakumar Sarbadhikari Fund.					
1	Bill,	Master of the Mint for medals ...			98	5	7
		Goodeve Fund.					
1	Bill,	Master of the Mint for medals ...			77	14	5
		Ritchie Fund.					
1	Bill,	Messrs. Thacker, Spink & Co. for prize books			60	0	0
		Sonamani Fund.					
1	Bill,	Prize books			39	14	4
		TOTAL Rs. ...			38,525	13	1

A. M. NASH,
Registrar.

(Confirmed),
GOOROO DASS BANERJEE,
Vice-Chancellor.

MINUTES

OF THE

FACULTY OF MEDICINE

FOR THE YEAR 1891-92.

No. 2.

THE 12TH APRIL, 1892.

Present:

E. A. BIRCH, ESQ., M.D., *President, in the Chair.*

RAI KANAILAL DE, BAHADUR, F.C.S., C.I.E.
K. McLEOD, ESQ., M.D., LL.D., F.R.C.S.
BABU JAGADBANDHU BASU, M.D.
D. O'C. RAYE, ESQ., M.D., F.R.C.S.
BABU DINABANDHU DATTA.
BABU DEBENDRANATH RAY, L.M.S.
RAI TARAPRASANNA RAY, BAHADUR, F.C.S.
MAULAVI ZAHIRUDDIN AHMAD, L.M.S.
BABU KAILASCHANDRA BASU, L.M.S.

360. The Faculty met at the request of the Syndicate to consider the following letter from Dr. Birch :—

NO. 335.

"FROM

THE PRINCIPAL, MEDICAL COLLEGE,

TO

THE REGISTRAR, CALCUTTA UNIVERSITY.

Dated Calcutta, the 11th March, 1892.

SIR,

Many cases of great hardship having been inflicted by the present Regulations of the University upon candidates who desire to obtain a Medical and Surgical qualification have come to my knowledge, and I desire to submit for the consideration of the Syndicate certain proposals which may remove the difficulties which cause those hardships.

In Great Britain and Ireland all students either pass or have the opportunity of passing the examinations of one or other of the Royal Colleges of Surgeons and Physicians, besides taking their degrees from a University. In India we have no Chartered Colleges, but our University grants the qualification of L.M.S., which must be held, and was, I presume, originally intended

to be held, as the analogue of the M.R.C.S. and L.R.C.P. of the English Colleges. Such in effect it practically is.

When a student fails at his final pass examination at one of the English Colleges he is referred back to his studies for a period of three or six months, or in very rare cases of "extreme ignorance" for 12 months, when he is re-examined in the subject or subjects in which he has failed.

In the Calcutta University if a student fails in any one subject he is held to have failed totally; he is obliged to wait for a whole year, to attend lectures, &c., in the interval, and to be then re-examined in all the subjects. In consequence of this state of things several evils arise—for example, a student who has failed only in a single minor subject (Hygiene, let us suppose) is on the same footing and under the same disabilities as the student who fails grievously in Medicine, Surgery and Midwifery. Each has to submit to the entire ordeal again at the end of a year. Instances are not wanting of students who have for years repeatedly tried to run the whole gauntlet and who have once, twice, or oftener, satisfied the examiners in *all* subjects, yet on no one occasion have they simultaneously proved successful in every branch;—thus, a man of moderate but useful and trustworthy ability may go on till he feels that his whole life has been wasted. I have now before me several such instances: In one a candidate passed in everything but Midwifery in 1887; in 1891 he passed well in Midwifery but failed in Medicine, in which he had before passed satisfactorily. In another case a candidate in 1881 failed in Medicine and Midwifery; he appeared again in 1886 when he passed in Medicine and Midwifery, but he failed this time in two subjects in which he had before acquitted himself satisfactorily, *viz.*, Surgery and Medical Jurisprudence; now in 1892 he is trying again. Eleven years of his life have been expended in these futile efforts; and if to this we add his 5 years of studentship, we get no less than 16 years gone for nothing. Surely, unless there is an absolute necessity for such a state of affairs, its perpetuation amounts to nothing less than a refinement of cruelty, and it is with the object of removing this that I venture to urge the matter upon the serious attention of the Syndicate.

I would not suggest any alteration in the present Regulations for the M.B. or M.D. degrees, the high and enviable positions of which should be maintained or even enhanced; but I would propose that we, as far as possible, assimilate the L.M.S. Regulations to those of the qualifying Colleges of England by the adoption of the following rules, *viz.*,—that a candidate who has failed in Medicine, Surgery *or* Midwifery, or in any two of them at the 2nd L.M.S. examination, be referred to his studies in these subjects for six months, at the expiration of which time he will become eligible for re-examination in the subject or subjects only in which he has failed, provided he produce evidence of having attended during that period the practice of a recognised Hospital. Should he fail in all three. he will be referred for 12 months on the same conditions. Should he fail in any of the other three subjects, he will be dealt with as follows:—failure in Pathology shall entail reference for six months and evidence that the candidate has attended six (or twelve?) *post-mortem* pathological demonstrations by the Professor of Pathology, when he will become eligible for re-examination. Failure in Medical Jurisprudence and Hygiene (one or both) shall entail reference for three months, but in the case of rejection in the former, the candidate will be required to furnish evidence of having attended six medico-legal *post-mortems* by the Professor of Medical Jurisprudence or a Civil Surgeon, when he will be eligible for re-examination.

Briefly stated, these proposals are as follows:—The subjects of the 2nd L.M.S. examination may be divided thus:—

Major—Medicine, Surgery, Midwifery, and Pathology.

Minor—Medical Jurisprudence and Hygiene.

(1.) Failures in any one or two or the major subjects to be referred for 6 months.

(2.) Failures in one or both of the minor subjects to be referred for three months.

To these rules I should add the following so as to meet all possible cases :—

(3.) Failures in two major and one minor or one major and two minor subjects to be referred for six months.

(4.) Any failure in excess of the above to be referred to his studies for a period of twelve months. At the expiration of the above periods the candidates to be re-examined in those subjects only in which they have failed, provided they produce evidence of having undergone a regular course of instruction, as above indicated, in the interval.

(5.) But should any candidate who has been rejected fail to appear for re-examination within one year, he shall, at any subsequent time he may present himself, be called upon to submit to the full examination just as though he had never presented himself.

(6.) The full fee (*vide* para. 18 of the Regulations) to be charged for each individual re-examination.

(7.) A failure at a re-examination may be referred once and only once in the subject or subjects in which he has failed, but such second re-examination must take place within the prescribed period and within one year from the date of the original or primary failure.

I should advise the Syndicate still further to endeavour to imitate the wholesome Regulations of the English Colleges by ordaining—

(8.) That no candidate who has been rejected by any University for a medical degree or by any medical or surgical licensing body for its licence or membership shall be admitted to the examinations for the L.M.S. qualification or M.B. degree of the Calcutta University till six months have expired from the date of his rejection.

[It will be noted that such a rule would prevent the scandal to which we are now liable of a candidate who has failed for his L.M.S. in March appearing for, and perhaps obtaining the higher qualification of, M.B. in May.]

There may be difficulties, financial and others, in carrying out the whole of my suggestions, but the present state of affairs is so anomalous and calls so loudly for reform that I have little doubt that the proposals contained in this letter will meet with the universal support of the members of the Faculty, and I would entreat the Syndicate to devise some means of affording relief in the directions indicated.

Personally I cannot foresee insuperable difficulties, nor am I prepared to admit that, in the face of such great hardships as I have alluded to, the University should allow any difficulties to be insuperable, but institute such reforms as will meet the emergency.

I have the honor to be,

SIR,

Your most obedient servant,

(Sd.) EDWARD A. BIRCH,

Principal, Medical College."

The letter having been read, Dr. McLeod proposed that the consideration of the proposals be adjourned for a fortnight for the purpose of allowing Dr. Birch's letter to be printed and circulated to all the members of the Faculty.

Dr. Raye seconded the motion.

The President having spoken against the motion, it was put to the vote and lost.

The President then proposed that the Faculty recommend to the Syndicate for adoption the principle that candidates who fail at the final L.M.S. examination should be re-examined only in the subject or subjects in which they fail.

Dr. Jagabandhu Basu seconded the motion.

Dr. McLeod spoke against the motion, and Babu Debendranath Ray in favour of it.

Dr. Raye was of opinion that the principle was a good one, but it was liable to abuse. Candidates might entirely neglect one or more subjects intending to take them up at the next examination.

The President having replied to Dr. McLeod, the motion was put to the vote and carried.

On the motion of Babu Debendranath Ray the consideration of the details of the scheme contained in Dr. Birch's letter was adjourned.

A. M. NASH,
Registrar.

(Confirmed),
EDWARD A. BIRCH,
President.

MINUTES

OF

THE FACULTY OF MEDICINE

FOR THE YEAR 1891-92.

No. 3.

THE 21ST APRIL, 1892.

Present:

E. A. BIRCH, ESQ., M.D., *President, in the Chair.*

RAI KANAILAL DE, BAHADUR, F.C.S., C.I.E.
BABU SURYYAKUMAR SARBADHIKARI.
RAI LALMADHAB MUKERJEE, BAHADUR, L.M.S.
BABU DEBENDRANATH RAY, L.M.S.
J. O'BRIEN, ESQ., M.D., F.R.C.S.E.
MAULAVI ZAHIRUDDIN AHMAD, L.M.S.
J. F. P. MCCONNELL, ESQ., M.D.
BABU KAILAS CHANDRA BASU, L.M.S.

361. The Faculty met to consider the details of the scheme proposed in Dr. Birch's letter, dated the 25th March, to which the following note had been added :—

"*Further note.*—I am doubtful as to the advisability of retaining Rule (7). It may not be desirable to go so far. I am inclined to reject it.

I should consider the acceptance of Rule (8) essential to the vitality of the scheme. In fact were it rejected, Rules (1), (2), (3) and (4) would become absurd. They would be over-ridden by the existing anomalous privilege.

Also, I think that it will be desirable to consider the possibility of referring candidates who have failed at the First L.M.S. for 3 or 6 months in order to complete the scheme. This point will be one of some difficulty, because the courses of instruction may clash. If found a serious difficulty, it may be left alone."

RESOLVED—

That the Faculty recommend to the Syndicate—

(1.) That the Second L. M. S. examination be held twice a year.

(2.) That a candidate who fails at the Second L.M.S. examination be re-examined only in the subject or subjects in which he has failed, provided he presents himself for re-examination within one year from the date of the examination at which he failed. If he fails to present himself for re-examination within one year, he will be re-examined in all the prescribed subjects.

(3.) That a candidate who fails in more than two of the four subjects, Medicine, Surgery, Midwifery, and Pathology, or in two of these subjects and in Medical Jurisprudence and Hygiene, be not admitted to the examination next following that at which he failed.

(4.) That in the foot-note to para. 18 of the Regulations for L.M.S. examination (Calendar for 1892, p. XIV) the words "in other subjects attendance at one course of lectures as defined in para. 16" be omitted, and the following words substituted :—

"In Pathology, attendance at six *post-mortem* pathological demonstrations by the Professor of Pathology ; in Medical Jurisprudence, attendance at six medico-legal *post-mortems* by the Professor of Medical Jurisprudence or a Civil Surgeon."

(5.) That every candidate for re-examination be required to pay the full fee of twenty-five rupees.

(6.) That no candidate who has failed at an examination of any University for a Medical Degree, or of any Medical or Surgical licensing body for its licence or membership, be admitted to the Second L. M. S., or to the Second M. B. examination, till six months have expired from the date of such failure.

A. M. NASH,
Registrar.

(Confirmed),
EDWARD A. BIRCH,
President.

MINUTES OF THE SYNDICATE

FOR THE YEAR 1891-92.

No. 16.

THE 22ND APRIL, 1892.

Present:

THE HON'BLE MR. JUSTICE GOOROO DASS BANERJEE, D. L.,

Vice-Chancellor, in the Chair.

NAWAB ABDOOL LUTEEF BAHADUR, C.I.E.
CHARLES H. TAWNEY, ESQ., C.I.E.
THE HON'BLE MR. JUSTICE AMEER ALI, C.I.E.
J. S. SLATER, ESQ.
BABU ASUTOSH MUKHOPADHYAY, F.R.A.S., F.R.S.E.

362. Read the following correspondence between Babu Ashutosh Mookerjea, Examiner in English at the F. A. Examination, and the Registrar.

"BHOWANIPUR,
1st March, 1892.

"To

THE REGISTRAR, CALCUTTA UNIVERSITY.

DEAR SIR,

I beg to inform you that, being ill, I was unable to be present at the Senate House yesterday, nor do I feel strong enough to go there to-day to attend the Examiners' meeting. I request therefore the favour of your sending me a copy of the Rules which may be framed by my colleagues.

Please let me know if you have got any answer papers for me, so that I may arrange to have them brought here

Yours faithfully,
(Sd.) ASHUTOSH MOOKERJEA,
M. A., B. L."

"OFFICE OF THE REGISTRAR,
CALCUTTA UNIVERSITY,
SENATE HOUSE,
The 2nd March, 1892.

SIR,

Yesterday morning, the Assistant Registrar informed you that your presence was required at a meeting of the Examiners to discuss the method of marking, but you failed to attend. I cannot give you any answer papers until you have complied with the rules and consulted with the other two examiners about the method of marking. If you are not well enough to do so you must resign your appointment as Examiner.

Yours faithfully,
(Sd.) A. M. NASH.'

"TO
THE REGISTRAR, CALCUTTA UNIVERSITY.

SIR,

I request to be informed if the Vice-Chancellor and Syndicate have invested you with any general or special authority under which you have the right of asking me to resign my appointment as Examiner. As soon as I know you possess such authority I will resign my appointment. Meantime I take leave to tell you that you have not apparently read my letter of yesterday addressed to you, or you would have known the reason why I did not attend the meeting of my colleagues. If it would not be a violation of any University Regulation, I should request the favour of your letting me know the names of the gentlemen who are my colleagues, in order that I might ask them to hold the meeting referred to in your letter at my house, No 13 Cheliaputty Lane, Bhowanipore, my health making it impossible for me to attend the Senate House for the purpose.

BHOWNANIPUR,
2nd March, 1892.

I have the honour to be,
SIR,
Your most obedient servant,
(Sd.) ASHUTOSH MOOKERJEA,
One of the F. A. Examiners in English."

"OFFICE OF THE REGISTRAR,
CALCUTTA UNIVERSITY,
SENATE HOUSE,
2nd March, 1892.

SIR,

It is my duty to see that the examination is carried out in accordance with the rules, and if an examiner is unable from any cause to comply with the rules, I cannot give him papers to examine. The other Examiners are Dr. K. S. Macdonald and Mr. Abdur Rahim. If you can arrange with them about the meeting, I have no objection.

I have, &c.,
Your obedient servant,
(Sd.) A. M. NASH,
Registrar."

"FROM

BABU ASHUTOSH MOOKERJEA, M. A., B L,

To

THE REGISTRAR, CALCUTTA UNIVERSITY.

SIR,

On the 2nd March instant you wrote to me—"It is my duty to see that the examination is carried out in accordance with the rules, and if an examiner is unable from any cause to comply with the rules, I cannot give him papers to examine. The other Examiners are Dr. K. S. Macdonald and Mr. Abdur Rahim. If you can arrange with them about the meeting, I have no objection."

Afterwards you sent to me of your own motion some packets of answer papers, without waiting to hear from me that Rule 9 of the General Rules for Examinations in Arts had been duly complied with. True it is that on 4th March instant Dr Macdonald and I had a meeting at my dwelling-house, No. 13 Cheliaputty Lane, Bhowanipur, but then Mr, Abdur Rahim was absent on account of ill-health.

On the 12th March instant I wrote to Mr. Abdur Rahim the following letter;—

"MY DEAR SIR,

How do you do now? I have not yet looked at any answer paper advisedly, for I am satisfied, and the Registrar also appears to think, that the work of examination cannot lawfully commence before Rule 9 of the General Rules for Examinations in Arts has been complied with. Dr. Macdonald and yourself had a meeting at the Senate House, and the reverend Doctor was present at a second meeting at my dwelling-house at which your ill-health prevented you from attending. But neither was a meeting of the Examiners within the meaning of Rule 9, nor am I sure that a copy of the rules agreed upon at either meeting has been transmitted to the Registrar. The question paper is extremely difficult to begin with; I, myself, had to strain all my faculties to follow Dr. Macdonald as he went over the paper, and it should seem that there are discrepancies between the rules agreed upon at the two meetings. After a most anxious consideration of the subject, I am of opinion that there ought to be a meeting of us three before we can safely begin or go on with the work of examining the answer papers; but as Dr. Macdonald was present once at the Senate House, and again at my place, and as, if I am not mistaken, he wished any further conference to take place at his own house, I am inclined to think it would be very indecent to summon him to the Senate House for the purpose, and that we two should meet him at his own house without any further delay, if you are by this time quite well. Will you kindly write to him at your earliest convenience and arrange the meeting? The matter is one of no small importance, and affects the interests of more than two thousand young men; you may lay it before the proper University authority if you like, but for my part I am content to leave it entirely to your discretion.

Yours Sincerely,

(Sd.) ASHUTOSH MOOKERJEA,

One of the F. A. Examiners."

Not having, up to this time, received from Mr. Abdur Rahim any reply to the letter set out above, I presume he is still unwell. But as I can not be a party to a deliberate violation of University Regulations by commencing in the circumstances which have occurred the examination of answer papers, I request the favour of your laying before the Vice-Chancellor and

Syndicate the whole case with the letters which have passed between you and me, together with this letter, in order that they may make such order as in the circumstances of the case may to them seem meet.

In conclusion, I beg to add that should the Vice-Chancellor and Syndicate call for them, I would place before them the notes which I took at he conference with Dr Macdonald and the remaining correspondence twhich has passed between the Reverend Doctor, Mr. Abdur Rahim and myself.

BHOWANIPUR: *18th March, 1892*

I have the honour to be,
SIR,
Your most obedient Servant,
(Sd) ASHUTOSH MOOKERJEA,
One of the F. A. Examiners in English."

"OFFICE OF THE REGISTRAR,
CALCUTTA UNIVERSITY,
SENATE HOUSE; *The 15th March, 1892.*

SIR,

I am unable to lay your letter before the Syndicate in time to be of any use, as the next meeting will be held next month.

Dr. Macdonald and Mr. Abdur Rahim met and decided the system of marking; the former went to your house and explained the system, and this should have been sufficient authority for you to proceed with your work as the other two Examiners have done, and I consider your conduct in delaying so long before commencing work altogether inexcusable.

Yours faithfully,
(Sd.) A. M. NASH."

"To
THE REGISTRAR, CALCUTTA UNIVERSITY.

SIR,

In reply to your letter of yesterday, the 15th March instant, I have to remark that I consider your own conduct in characterising my anxiety to duly comply with University Regulations as "altogether inexcusable" to be itself altogether inexcusable, to use your own language, besides being the height of arrogant presumption. But, however, as you say that you cannot lay the matter before the Syndicate till next month, and as it would be useless to discuss it with *you*, having regard to the interest of the University at stake, I commence the examination of the answer papers to-day.

BHOWANIPUR; *16th March, 1892.*

I have the honour to be,
SIR,
Your most obedient Servant,
(Sd.) ASHUTOSH MOOKERJEA,
One of the F. A. Examiners in English."

"OFFICE OF THE REGISTRAR,
CALCUTTA UNIVERSITY,
SENATE HOUSE, *The 22nd March, 1892.*

The undersigned has the honour, by direction of the Vice-Chancellor and Syndicate, to request that the gentlemen appointed to look over answers to the English prose paper, set at the recent F. A. Examination, will meet

without delay and decide upon a uniform system of marking under Rule 9 o General Rules relating to the Examinations in Arts

(Sd) A. M. NASH,

Registrar."

RESOLVED—

(Babu Asutosh Mukhopadhyay dissenting).

That the Syndicate consider the conduct of Babu Ashutosh Mookerjea, examiner in English at the F. A. examination, unjustifiable, and desire to put on record their strong disapprobation of it.

RESOLVED ALSO—

That a copy of this resolution be forwarded to Babu Ashutosh Mookerjea.

A. M. NASH,

Registrar.

(Confirmed),

GOOROO DASS BANERJEE,

Vice-Chancellor.

REPORT OF THE SYNDICATE FOR THE YEAR 1891-92.

The usual examinations have been held during the year in Arts, Law, Medicine, and Engineering; and a tabular statement is appended, showing the results and affording a comparison with the results of the previous year. The total number of candidates who appeared at this year's examinations was 8,632 against 9,878 in the previous year.

Entrance Examination.

The number of candidates registered for the Entrance examination held in February 1891 was 5,032, of whom 2,151 passed, 2,811 failed, 60 were absent, and 10 were expelled. Of the successful candidates, 330 were placed in the first division, 961 in the second, and 860 in the third. Of the 2,811 candidates who failed, 2,330 were rejected in English, 659 in Mathematics, 1,342 in the Second languages, 1,023 in History and Geography, and 67 in the aggregate. The number of candidates was less by 276 than in 1890, and the percentage of successful candidates decreased from 49·77 to 42·74.

252 candidates took up Drawing (optional subject) of whom 23 passed and 229 failed.

The following table shows the number of candidates that came up from each province, the number passed, and the percentage of successful candidates for the years 1890 and 1891 :—

ENTRANCE EXAMINATION.

	February, 1890.			February, 1891.		
	Number of candidates.	Number passed.	Percentage	Number of candidates.	Number passed.	Percentage.
Bengal ..	4,464	2,246	50·30	4,206	1,836	43·65
Assam ...	161	107	66·45	150	64	42·66
N.-W. P. & Oudh	30	20	66 66	31	7	22·58
Rajputana .	17	3	17·64	6	...	..
Panjab .	206	92	44 66	170	59	34 7
Central Provinces .	262	111	42·36	295	100	33·89
Central India States	46	14	30·43	41	20	48·78
Nepal —	3	3	100·	3	3	100·
Burmah ..	74	24	32 43	87	46	52 87
Ceylon ..	45	22	48·88	43	16	37·2
Total ...	5,308	2,642	49·77	5,032	2,151	42 74

The following table shows (1) the number of candidates from each province and the optional languages taken up; (2) the divisions in which the successful candidates were placed :—

	No. of candidates.	Second Languages.														Number passed			Total.
		Latin.	German.	Greek.	French.	Sanskrit.	Arabic.	Persian.	Urdu.	Hindi.	Bengali.	Uriya.	Burmese.	Armenian	Tamil.	First Division.	Second Division	Third Division.	
Bengal ...	4,206	104	1	2	31	2,894	10	433	10	84	599	29	3	6		300	805	731	1,836
Assam ...	150	3	..	...	..	87	1	18	...	..	41	..	..	.	.	7	30	27	64
N.-W. P. and Oudh ...	31	10	..	...	2	1	...	4	8	6	...	..	.	...	...		3	4	7
Panjab ...	170	15	.	.	1	8	4	129	12		1	.	...	...	..	12	30	17	59
Rajputana ...	6	...	.	...	.	..	...	...	2	4	...	.	...	...	..	...	..	...	...
Central Provinces ...	295	15	.	...		208	...	54	2	16	...	...	...	...	.	5	51	44	100
Central India States ...	41	...	.	...	.	23	1	14	...	3	...	.	...	.	..	1	9	10	20
Nepal ...	3	...	.	...	..	3	...		...	...	...	.	..	...	...	...	2	1	3
Burmah ...	87	9	...	..	12	...	...	1	1	...	..	...	63	.	1	4	23	19	46
Ceylon ...	43	39	...	..	1	...	...	...	...	..	...	...	...	...	3	1	8	7	16
Total ...	5,032	195	1	2	47	3,224	16	653	35	113	641	29	66	6	4	330	961	860	2,151

The following table shows the number of candidates who took up the several vernacular languages.

	No. of candidates.	Bengali.	Hindi.	Uriya.	Mahrathi.	Urdu.	Burmese	Armenian.	Parbatia.	Assamese.	Gujrathi.	Khasia.	Tamil.	English.
Bengal	4206	3365	202	83	...	411	3	6	.	.	.	.	.	134
Assam	150	114	...	...	.	.				3	.	3	.	..
N.-W. P. and Oudh ...	31	1	6	...	.	12	.		..	.	.	.		12
Rajputana	6	..	4	.	.	2	..	.			..	..	...	...
Panjab	170	2	3	.	..	148			.	.	1	.	.	16
Central Provinces ...	295	3	91	7	134	48	.		.	..	...		..	12
Central India States ...	41	...	6	..	22	12	..	..	.		1	..	...	...
Nepal	3	1	...	..	...	...		..	2		.	.	.	..
Burmah	87	.	..	.	..	2	63		.	.		.	1	21
Ceylon	43	...	...	...	.	..		.	..	.			3	40
Total ..	5032	3486	312	90	156	635	66	6	2	35	2	3	4	235

A statement of the number of candidates who failed in one subject only is subjoined :—

English .	751	Second Language ...	176
Mathematics ..	50	History and Geography	70

The following is a classification of the candidates according to the stations at which they were examined and the second languages they took up :—

BENGAL.

	Number of Candidates.	Greek.	Latin.	German.	French.	Sanskrit.	Arabic.	Persian.	Urdu.	Hindi.	Bengali.	Uriya.	Armenian.	Burmese.	Tamil.
Bankura	69	...	..	..	...	37		..	1		31	.	...	..	...
Barisal . .	149		.	..	...	132	.	4			13	..	.	..	..
Baulia	47		..	..	...	40	..		.		7	...	..	..	
Berhampur ..	114		...	..	...	100	..	2	1		11	..	...	.	...
Bhagalpur	149	..	. .	..	...	101	.	38	..	5	5	...	...	..	
Burdwan	198	.		.	..	162	..	4		3	29	.	..	..	
Calcutta	1791	2	79	..	24	1345	2	45	4	3	278	...	6	3	...
Chittagong ..	66	.	...	.	..	48	.	8	.		10	..	..	..	..
Cooch-Behar ...	36	..	...	..	...	24	...	...	.	.	12	..	.	..	..
Dacca	519	...	1	..	...	367	...	19	.	..	132	.	..	..	...
Darjeeling	26	..	22	1	3	..	..	...		.		...	..	..	...
Hughli	155	...	...	..	4	127	.	7	.		17	..	...	..	...
Katak . ..	95	...	2	..	...	54	2	7	..	...	3	27	...	..	..
Krishnagar ...	89	...	...	..	...	79	.	4	.	...	6	.	...	..	..
Midnapur	116	..	...	...	...	86	.	2	...	...	26	2	...	..	...
Patna	513	...	...	..	...	131	6	290	4	70	12	...	...	...	...
Ranchi	31	...	. .	..	...	27	.	..	...	3	1	..	...	...	..
Rungpur	46	..	...	..	..	37	.	3	.	..	6		.	..	...

ASSAM.

	Number of candidates.	Greek.	Latin.	German.	French	Sanskrit.	Arabic.	Persian.	Urdu.	Hindi.	Bengali.	Uriya.	Armenian.	Burmese	Tamil.
Debrugarh ..	31	...	...	...	...	23	...	4	...	...	4	...	...	.	...
Dhubri ...	11	..	...	...	...	7	.	...	..	..	4	.	...	.	...
Gauhati ...	24	...	...	...	...	11	..	5	...	...	8	.	...	..	.
Shillong ...	7	..	3	...	...	4	.	...	...	...	...	...	.	..	.
Sylhet ...	77	..	...	...	..	42	1	9	...	...	25	...	...	...	...

N.-W. P. AND OUDH.

Agra ...	31	...	4	...	1	1	.	10	9	6	..	...	...	...	..
Mussoorie ...	7	...	6	...	1	...	.	...	..	...	...	...	...	.	..
Naini Tal ...	5	..	...	...	...	...		.	1	4	...	...	...	...	..

PANJAB.

Lahore ..	152	...	4	..	...	8	4	123	12	...	1	..	.	..	.
Simla	12	...	11	...	1	...	.	...	..	..	...	..	..	...	.

CENTRAL PROVINCES.

Jabalpur ..	98	...	2	...	...	53	...	41	.	2	...	...	.	...	..
Nagpur ...	163	..	13	...	...	137	...	6	2	5	...	.	...	...	..
Sagar ..	25	...	...	...	...	9	.	7	...	9	...	..	...	..	..
Sambalpur ...	9	...	...	...	...	9	...	..	...	..	...	..	...	...	...

CENTRAL INDIA STATES.

Indore ...	30	...	...	..	...	23	...	5	...	2	...	...	..	.	..
Sehore ...	11	...	...	...	...	...	1	9	..	1	...	..	...	...	...

BURMAH.

Maulmein ...	15	..	...	...	6	...	.	...	...	..	...	.	.	9	
Rangoon ...	72	..	9	..	6	...	..	1	1	...	..	...	...	54	1

CEYLON.

Colombo ...	23	...	21	...	1	...	...	...	...	...	...	...	..	...	1
Kandy ...	14		14	...	..	...	...	...	...	...	...	...	.	...	...
Jaffna. ...	6	...	4	...	...	...	...	..	...	...	...	..	...	...	2

The divisions in which the successful candidates from each province were placed, and the religions professed, are shown in the following tables :—

PROVINCES.

	No. of candidates.	Number Passed.			
		First Division.	Second Division.	Third Division.	Total.
Bengal	(a) 4,206	(b) 300	(c) 805	(d) 731	1,836
Assam	150	7	30	27	64
N.-W. P. and Oudh ...	(e) 31	. .	3	(f) 4	7
Rajputana	6	...	...	. .	...
Panjab	(g) 170	(h) 12	(i) 30	(j) 17	59
Central Provinces	(k) 295	(l) 5	51	44	100
Central India States ...	41	1	9	10	20
Nepal	3	...	2	1	3
Burmah	(m) 87	(n) 4	(o) 23	(p) 19	46
Ceylon	(q) 43	1	8	7	16
Total ...	5,032	330	961	860	2,151

RELIGION.

BENGAL.

Hindus	(r) 3,667	252	681	660	1593
Mahomedans	308	14	54	37	105
Christians	(s) 165	(t) 28	(u) 48	(v) 23	99
Others	(w) 66	6	(x) 22	11	39
Total ...	4,206	300	805	731	1,836

ASSAM.

Hindus	122	5	26	21	52
Mahomedans	23	2	3	3	8
Christians	5	...	1	3	4
Total ...	150	7	30	27	64

(a) Of these 35 were females.
(b) ,, 6 ,,
(c) ,, 15 ,,
(d) ,, 2 ,,
(e) ,, 2 ,,
(f) ,, 1 was a female.
(g) ,, 5 were females.
(h) ,, 1 was a female.
(i) ,, 2 were females.
(j) ,, 1 was a female.
(k) ,, 1 ,,
(l) ,, 1 ,,
(m) Of these 13 were females.
(n) ,, 1 was a female.
(o) ,, 4 were females.
(p) ,, 6 ,,
(q) ,, 1 was a female.
(r) ,, 1 ,,
(s) ,, 30 were females.
(t) ,, 6 ,,
(u) ,, 12 ,,
(v) ,, 2 ,,
(w) ,, 4
(x) ,, 3 ,,

N.-W. P. AND OUDH.

	No. of candidates.	Number Passed.			
		First Division.	Second Division.	Third Division	Total.
Hindus	13	...	1	1	2
Mahomedans . .	3	...	.		.
Christians	(a) 15	.	2	(b) 3	5
Total ...	31		3	4	7

RAJPUTANA.

Hindus	3			..	..
Others	3	..	..	...	..
Total ...		..	...		.

PANJAB.

Hindus	88	5	14	6	25
Mahomedans	40	...	6	1	7
Christians ...	(c) 30	(d) 7	(e) 7	(f) 8	22
Others	12	.. .	3	2	5
Total ..	170	12	30	17	59

CENTRAL PROVINCES.

Hindus ..	253	3	47	35	85
Mahomedans .	27	1	2	4	7
Christians	(g) 13	(h) 1	1	4	6
Others ..	2	.	1	1	2
Total ...	295	5	51	44	100

CENTRAL INDIA STATES.

Hindus	35	1	5	9	15
Mahomedans	3	.....	3	.	3
Christians	1	... ..	.....	1	1
Others	2	.	1	... .	1
Total ...	41	1	9	10	20

(a) Of these 2 were females.
(b) ,, 1 was a female.
(c) ,, 5 were females.
(d) ,, 1 was a female
(e) Of these 2 were females.
(f) ,, 1 was a female.
(g) ,, 1 ,,
(h) ,, 1 ,,

NEPAL.

	Number of Candidates.	Number Passed			
		First Division	Second Division	Third Division.	Total.
Hindus	3	...	2	1	3

BURMAH.

Hindu	1	... .	. . ..	. .	.. . .
Mahomedans	3	1	.. ..	...	1
Christians	(a) 46	(b) 2	(c) 14	(d) 12	28
Others. ...	37	1	9	7	17
Total .	87	4	23	19	46

CEYLON.

Hindus	9	...	1	1	2
Christians . .	30	1	7	6	14
Others .. .	(e) 4		. ..	. ..	.. ..
Total ...	43	1	8	7	16

The following statement shows the number of unsuccessful candidates of previous years that came up from each province and the number passed :—

	No. of Candidates.	Number Passed.				
		First Division.	Second Division.	Third Division.	Total.	Percentage.
Bengal . ..	1,210	14	176	177	367	30·33
Assam	38	.. ...	7	10	17	44·73
N.-W. P and Oudh..	13	... ..	2	1	3	23·07
Panjab	33	4	5	3	12	36·36
Central Provinces ...	89	2	22	18	42	47·19
Central India States ..	17	1	4	3	8	47·05
Rajputana ...	1	.. ..	.....	. ..	. ....	...
Nepal	1	.....	... ..	1	1	100·
Burmah	24	1	7	6	14	58·33
Ceylon . ..	4	.....	2	. ...	2	50·
Total ..	1,430	22	225	219	466	32·58

(a) Of these 13 were females.
(b) ,, 1 was a female.
(c) Of these 4 were females.
(d) ,, 6 ,, ,,
(e) ,, 1 was a female

The following schools having failed, after due warning, to show improved results at the last Entrance Examination the privilege of sending up candidates to the Entrance Examination was withdrawn from them :—

Arrah Town School.
Aryan Training Institution, Bankipur.
Jalandhar Mission School.
Noakhali Rajkumar Jubilee School.
P. Gopinathpur School.
Katak Samyabadi Institution.

At the Entrance Examination held in February 1892 there were 5,208 candidates.

First Examination in Arts.

The number of candidates registered for the First Examination in Arts held in February 1891, was 2,058, of whom 762 passed, 1,244 failed, 51 were absent, and 1 was expelled. Of the successful candidates, 31 were placed in the first division, 188 in the second, and 543 in the third. Of the 1,244 candidates who failed, 1,005 were rejected in English, 731 in Mathematics, 518 in the Second languages, 502 failed to secure the minimum in History, 231 in Logic, 256 in Physics and Chemistry, and 36 in the aggregate.

A comparative statement of the number of candidates, the number passed, and the percentage of passed candidates from each province, for the years 1890 and 1891 is subjoined.

FIRST ARTS EXAMINATION

	March, 1890.			February, 1891.		
	Number of candidates.	Number passed.	Percentage.	Number of candidates.	Number passed.	Percentage.
Bengal	2,761	1,020	36·94	1,969	711	36·10
Assam	2	2	100·	2	1	50·
N.-W. P. & Oudh ...	7	5	71·42	1	...	.
Rajputana	...	.	...	1	1	100·
Panjab	6	2	33·3	3	...	...
Central Provinces ..	64	46	71·87	60	40	66·66
Central India States	12	2	16·66	8	1	12·5
Burmah	13	6	46·15	8	5	62·5
Ceylon	7	6	85·71	6	3	50·
Total ...	2,872	1,089	37·91	2,058	762	37·02

The following table shows (1) the number of candidates from each province and the languages taken up by them; (2) the divisions in which the successful candidates were placed :—

	No. of candidates.	Second Languages.									Passed.			Total.
		Greek.	Latin.	French.	Sanskrit.	Bengali.	Arabic.	Persian.	Armenian.	Pali.	First Division.	Second Division.	Third Division.	
Bengal	1,969	1	31	8	1,760	1	6	161	1	...	31	166	514	711
Assam ...	2	...	...	...	2	...	...	...	...	...	...	...	1	1
N.-W. P. and Oudh	1	...	...	1	...	...	...	...	...	...	...	...	...	...
Rajputana ...	1	...	...	...	...	...	...	1	...	...	...	...	1	1
Panjab	3	...	...	...	1	...	...	2	...	...	...	...	...	...
Central Provinces ...	60	...	3	1	43	...	...	13	...	...	...	20	20	40
Central India States .	8	...	...	...	8	...	...	...	...	...	...	...	1	1
Burmah	8	...	1	1	...	...	...	...	...	6	...	2	3	5
Ceylon	6	...	6	...	...	...	...	...	...	...	...	...	3	3
Total ...	2,058	1	41	11	1,814	1	6	177	1	6	31	188	543	762

The following is a statement of the number of candidates who failed in one subject only :—

English	168
Mathematics	61
Second Language	21

A classification of the candidates according to the second languages they took up, gives the following results :—

BENGAL.

	No. of candidates.	Greek.	Latin.	French.	Sanskrit.	Bengali.	Arabic.	Persian.	Pali.	Armenian.
Calcutta ...	1,020	1	22	8	952	1	3	32	...	1
Hughli ...	73	...	...	...	72	...	...	1	...	...
Burdwan ...	75	...	...	...	75	...	...	...	...	...
Dacca ...	298	...	2	...	284	...	2	10	...	...
Krishnagar...	32	...	...	...	32	...	...	...	...	...
Berhampur...	42	...	...	...	42	...	...	...	...	...
Patna ...	171	...	...	...	71	...	1	99	...	...
Bhagalpur ...	46	...	...	...	33	...	...	13	...	...
Midnapur ...	30	...	...	...	30	...	...	...	...	...
Katak ...	30	...	2	...	26	...	...	2	...	...
Barisal ...	39	...	...	...	39	...	...	...	...	...
Chittagong...	29	...	...	...	27	...	...	2	...	...
Baulia ...	42	...	...	...	41	...	...	1	...	...
Darjeeling ...	5	...	5	...	...	...	...	...	...	...
Cooch Behar	40	...	...	...	39	...	...	1	...	...

N.-W. PROVINCES AND OUDH.

	No. of candidates.	Greek.	Latin.	French.	Sanskrit.	Bengali.	Arabic.	Persian.	Pali.	Armenian.
Agra ...	2	..	...	1	...	...	...	1	...	..

PANJAB.

Lahore ...	3	...	..	...	1	...	...	2	...	...

BURMAH.

Rangoon ...	8	...	1	1	...	...	...	.	6	.

CENTRAL PROVINCES.

Jabalpur ...	30	...	...	1	17	...	...	12	...	...
Nagpur .	29	...	2	..	26	...	...	1	...	...

CENTRAL INDIA STATES.

Indore ...	8	...	1		7	.	...	..	...	...

CEYLON.

Colombo ...	5	...	5	...	...	...	...	...	...	..
Kandy ...	1	...	1	...	...	...	..	...	...	..

The following tables show the divisions in which the successful candidates from each province passed, and the religions professed.

PROVINCES.

	No. of candidates.	Number Passed.			
		First Division.	Second Division.	Third Division.	Total.
Bengal	(a) 1,969	31	(b) 166	(c) 514	711
Assam	2	...	...	1	1
N.-W. P. and Oudh .	1	...	...	...	..
Rajputana	1	...	...	1	1
Panjab	3	..	...	...	..
Central Provinces ..	(d) 60	...	(e) 20	20	40
Central India States ...	8	...	...	1	1
Burmah	8	...	2	3	5
Ceylon .. .	6	...	...	3	3
Total ...	2,058	31	188	543	762

RELIGION.

BENGAL.

Hindus	1,772	27	144	472	643
Mahomedans	112	3	9	17	29
Christians	(f) 27	..	(g) 6	6	12
Others	(h) 58	1	7	(i) 19	27
Total ...	1,969	31	166	514	711

ASSAM.

Hindus	2	..	...	1	1

N.-W. P. AND OUDH.

Christian	1	..	...	...	...

RAJPUTANA.

Hindu.	1	...	...	1	1

(a) Of these 7 were females.
(b) ,, 2 ,,
(c) ,, 2 ,,
(d) ,, 1 was a female.
(e) ,, 1 ,,
(f) Of these 5 were females
(g) ,, 2 ,,
(h) ,, 2 ,,
(i) ,, 2 ,,

PANJAB.

	Number of candidates.	Number Passed.			
		First Division.	Second Division.	Third Division.	Total.
Hindu	1	...	...	...	...
Christians	2	...	...	...	...
Total ...	3	...	...	...	...

CENTRAL PROVINCES.

Hindus	49	...	12	18	30
Mahomedans	6	...	4	1	5
Christians	(a) 5	...	(b) 4	1	5
Total ...	60	...	20	20	40

CENTRAL INDIA STATES.

Hindus	7	...	...	1	1
Other	1	..	...	...	...
Total ...	8	...	...	1	1

BURMAH.

Hindu	1	...	...	...	...
Mahomedan	1	...	...	...	...
Christians	4	...	2	2	4
Others	2	...	...	1	1
Total ...	8	...	2	3	5

CEYLON.

Hindu	1	...	...	...	...
Christians	3	...	...	3	3
Others	2	...	...	...	...
Total ...	6	...	...	3	3

(a) Of these 1 was a female. (b) Of these 1 was a female.

The following statement shows the number of unsuccessful candidates of previous years that came up from each province, and the number passed :—

	Number of candidates.	Number passed.				Percentage.
		First Division.	Second Division.	Third Division.	Total.	
Bengal	997	...	21	236	257	25 77
Assam	1	...	...	...	...	...
Panjab	2	...	...	...	...	
Rajputana ...	1	...	...	1	1	100
Central Provinces ...	17	...	3	8	11	64·70
Central India States ...	3	...	...	...	...	...
Burmah	1	...	...	...	...	...
Ceylon	1	.	...	...	..	...
Total ...	1,023	...	24	245	269	26·29

At the First Arts examination of February 1892 there were 2,489 candidates.

B. A. Degree Examination.

The number of candidates registered for the B. A. examination held in February 1891 was 860, being 189 less than in the year 1890; and of these, 697 took up the A. course against 901 in 1890, and 163 took up the B. course against 148 in 1890.

Of the 697 candidates in the A. course, 177, or over 25 per cent., were successful; and 520 (including 17 absentees), or over 74 per cent. failed. Of the successful candidates, 136 were placed in the Pass list and 41 in the Honour lists. Of the latter, 1 obtained Honours in three subjects, and 7 in two. Of the 50 names thus appearing in the Honour lists, 6 were placed in the first division and 44 in the second.

Of the 163 candidates in the B. course, 63, or over 38 per cent., were successful; and 100 (including 4 absentees), or over 61 per cent., failed. Of the successful candidates, 38 were placed in the Pass list and 25 in the Honour lists. Of the latter, three obtained Honours in two subjects. Of the 28 candidates who gained Honours, 1 was placed in the first division, and 27 in the second.

Of the whole number examined, 240 or over 27 per cent. passed, against 41 per cent. in the year 1890.

Of the 620 candidates who failed, 398 were rejected in English, 271 in Philosophy, 102 in Mathematics, 166 in the Second languages, 68 in History, 34 in Physics and Chemistry, and 52 in the aggregate.

following is a comparative statement of the total number of candidates, the number passed, and the percentage of successful candidates, from each province for the years 1890 and 1891 :—

	March 1890.			February 1891.		
	Number of candidates.	Number passed.	Per-centage.	Number of candidates.	Number passed.	Per-centage.
Bengal	1,001	411	41·05	820	224	27 31
N.-W. P. and Oudh	10	5	50·	...	...	...
Assam	6	...	...	1	...	...
Rajputana ...	...	...	...	1	...	...
Central Provinces ...	26	15	57·69	35	15	42·85
Panjab	1	...	...	1	...	...
Burmah	2	2	100·	1	1	100·
Ceylon	3	2	66·6	1	...	...
Total ...	1,049	435	41·46	860	240	27·9

The following tables show (1) the number of candidates from each province who took up the A. and B. courses respectively, (2) the optional subjects taken up by the A. and B. course candidates, and (3) the divisions in which the successful candidates were placed :—

B. A. EXAMINATION

A. COURSE.

	Number of candidates.	Second Languages.							History.		Mathematics.		Passed			
		Pass.					Honours.						With Honours.		Without Honours	Total.
		Greek.	Latin.	Sanskrit.	Persian.	Arabic.	Sanskrit.	Persian.	Pass.	Honours.	Pass.	Honours.	First Division.	Second Division.		
Bengal ...	674	2	2	361	32	2	31	5	131	5	89	14	5	33	130	168
Assam ...	1	..	...	...	...	...	...	...	1	..	...	...	...	—	...	...
Central Provinces	19	...	.	12	.	...	4	...	3	..	...	...	1	2	6	9
Rajputana	1	..	..	...	1	..	...	...	...	.	.	...	...	.	..	...
Panjab ...	1	.	.	..	...	..	...	...	...	...	1	...	...	...	...	..
Ceylon	1		.	.	.	...	...	..	1	..	...	...	..	...	..	...
Total ..	697	2	2	373	33	2	35	5	136	5	90	14	6	35	136	177

B. COURSE.

	No. of candidates.	Physics and the Elements of Chemistry.		Chemistry and the Elements of Physics.	Passed			Total.
					With Honours.		Without Honours.	
		Pass.	Honours.	Pass.	First Division.	Second Division.		
Bengal	146	94	24	28	1	22	33	56
Central Provinces ...	16	10	2	4	...	2	4	6
Burmah	1	1	...	...	...	...	1	1
Total ...	163	105	26	32	1	24	38	63

The following is a statement of the number of candidates who failed in one subject only :—

English	99
Philosophy	28
Mathematics	27
Second Language	27
History	19
Physics	5

The divisions in which the candidates from each province passed, and the religions which they professed, are shown in the following tables :—

PROVINCES.	Number of candidates.	Passed			Total.
		With Honours.		Without Honours.	
		First Division.	Second Division.		
Bengal	(a) 820	6	55	(b) 163	224
Assam	1	...	...	...	..
Rajputana	1	...	...	...	..
Central Provinces ...	35	1	4	10	15
Panjab	1	...	...	...	...
Burmah	1	...	...	1	1
Ceylon	1	...	...	...	...
Total ...	860	7	59	174	240

(a) Of these 1 was a female. (b) Of these 1 was a female.

RELIGION.

BENGAL.

	Number of candidates.	Passed: With Honours, First Division.	Passed: With Honours, Second Division.	Passed: Without Honours.	Total.
Hindus	744	4	46	148	198
Mahomedans	39	2	4	6	12
Christians	16	...	2	4	6
Others ...	(a) 21	...	3	(b) 5	8
Total ..	820	6	55	163	224

ASSAM.

Hindu	1	...	...	...	...

RAJPUTANA.

Hindu	1	...	—	...	...

CENTRAL PROVINCES.

Hindus	32	1	4	9	14
Mahomedans	2		...	..	...
Other	1	...	..	1	1
Total ...	35	1	4	10	15

PUNJAB.

Mahomedan	1	...	...	...	...

BURMAH.

Other	1	...	...	1	1

CEYLON.

Christian	1	...	...	...	...

(a) Of these 1 was a female. (b) Of these 1 was a female.

The following statement shows the number of unsuccessful candidates of previous years who came up from each province and the number passed :—

A. COURSE.

	Number of candidates	Passed.				Percentage.
		With Honours.		Without Honours.	Total.	
		First Division	Second Division			
Bengal ..	274	1	2	36	39	14 23
Central Provinces .	4	...	.	2	2	50·
Ceylon ..	1	.	...	...	..	...
Total .	279	1	2	38	41	14·69

B. COURSE

	Number of candidates.	Passed.				Percentage.
		With Honours.		Without Honours.	Total.	
		First Division.	Second Division.			
Bengal	47	...	1	7	8	17 02
Central Provinces ...	4	...	..	1	1	25·
Total ...	51	—	1	8	9	17·64

At the B. A. examination of February 1892, there were 1,235 candidates.

Examination for the degree of M. A.

The M. A. examination was held in November 1891. There were 134 candidates for that degree, of whom 52 were successful and 82 (including 23 absentees) failed. Of the 10 candidates who were placed in the first class, 2 passed in English, 3 in Sanskrit, 1 in Persian, 1 in Arabic, 1 in History and 2 in Physics.

The institutions from which the candidates came up, the subjects of examination, and the number passed, are shown n the following table :—

M. A. EXAMINATION.

	English.		Mathematics.		Sanskrit.		Arabic.		Persian.		History.		Philosophy.		Chemistry. A.		Physics. B.		Total.	
	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.
Agra College	1	1	...	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	1	
Berhampur College	1	...	...	...	...	...	...	..	...	...	...	...	...	...	...	...	..	...	1	...
Bishop's College	...	...	...	...	...	...	...	...	...	...	...	...	1	1	...	...	...	...	1	1
City College	...	...	...	...	...	...	...	...	...	...	...	..	1	...	...	...	...	..	1	...
Dacca College	5	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	..	5	1
F. C. Institution and Duff College ...	1	...	...	...	...	...	...	...	...	...	1	1	7	1	...	...	...	..	9	2
Hughli College	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	...	...	...	2	1
Jabalpur College	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1	1	1
M. A. O. College	...	...	...	...	...	...	1	1	...	...	...	...	...	...	...	...	...	...	1	1
Metropolitan Institution	11	3	...	...	...	..	...	...	...	...	...	...	...	...	...	...	...	...	11	3
Morris College	1	1	...	...	...	...	...	...	...	...	...	...	..	...	..	...	...	...	1	1
Presidency College	22	7	6	3	...	...	...	...	1	1	...	...	5	3	...	...	4	4	38	18
Private Students	31	9	1	...	1	1	...	...	...	...	4	1	4	3	...	...	...	...	41	14
Rajshahye College	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	...
Sanskrit College	...	...	...	...	5	4	...	...	...	...	..	...	...	...	...	...	...	...	5	4
St. Xavier's College	7	1	...	...	...	...	...	...	...	...	...	...	...	.	...	...	...	...	7	1
Teachers	3	2	2	...	...	...	...	...	...	...	...	...	2	...	...	...	...	...	7	2
Victoria College, Cooch Behar ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	1	1
Total ...	85	26	9	3	6	5	1	1	1	1	5	2	21	9	1	...	5	5	134	52

The examination for the Premchand Roychand Studentship was held this year in Literary subjects. Applications were received from 5 candidates, of whom 4 were present for examination, and 1 was absent. There were three studentships available, as no studentship was awarded in Literary subjects in 1887 and 1889. On the result of the examination, the three available studentships of Rs. 1,600 a year, each tenable for five years, were awarded to E. M. Wheeler, Janakinath Bhattacharyya and Hirendranath Datta.

Premchand Roychand Studentship Examination.

At the B. L. examination held in March 1891, there were 211 candidates, of whom 134 were successful, 15 were absent, and 62 failed. Of the successful candidates, 8 were placed in the first division and 126 in the second. On the recommendation of the Examiners, the Syndicate awarded a gold medal to Syed Ali Belgrami, of the Patna College, who stood first in the first division, and a prize of books of the value of Rs. 100 was awarded to Satischandra Mitra, of the Metropolitan Institution, who stood second in the first division.

Law Examinations.

A second B. L. Examination was held in November 1891 in which there were 184 candidates, of whom 50 were successful, 12 were absent, and 122 failed. Of the successful candidates, 5 were placed in the first division and 45 in the second. On the recommendation of the Examiners, the Syndicate awarded a gold medal to Wasudeo Ramchandra Dhobley, of the Morris College, Nagpur, who stood first in the first division.

The Colleges from which the candidates passed in each examination are shown in the following table :—

	March 1891.			November 1891.		
	Number of candidates.	Number passed.		Number of candidates.	Number passed.	
		First Division.	Second Division.		First Division.	Second Division.
Agra College	1	...	1	1	...	1
Berhampur College	4	...	1	5	...	2
City College	27	1	21	22	1	8
Dacca College	8	...	4	8	1	4
Hughli College	5	...	1	6	...	2
Jagannath College	2	...	1	1	...	...
Krishnagar College	3	...	1	2	...	...
Metropolitan Institution ..	65	2	39	54	1	11
Morris College	6	1	3	5	1	...
Muir Central College	1	...	1	1	...	...
Patna College	19	3	11	7	...	...
Rajchandra College, Barisal ..	...	...	...	1	..	1
Rajshahye College	1	...	...	4	...	..
Ravenshaw College	3	...	3	...	...	..
Ripon College	65	1	39	65	1	16
T. N. Jubilee College	1	...	...	1	...	..
Victoria College, Cooch Behar ..	...	...	...	1	...	...
Total ...	211	8	126	184	5	45

For the examination for Honours in Law held in March 1891, there was only one candidate who failed.

For the examination for Honours in Law held in November 1891, there were 3 candidates, of whom none passed.

Examinations in Medicine.

For the Preliminary Scientific L. M. S. examination held in March 1891, there were 32 candidates, including one female, of whom 25 passed (including one female), and 7 failed.

For the First L. M. S. examination held in March 1891, there were 10 candidates, of whom 7 passed and 3 failed.

For the Combined Preliminary Scientific and First L. M. S. examinations held in March 1891, there were 7 candidates, of whom 5 passed the Preliminary Scientific L. M. S. examination.

For the Second L. M. S. examination held in March 1891, there were 21 candidates, of whom 13 passed, 6 failed, and 2 were absent.

For the Preliminary Scientific L. M. S. examination held in March 1892, there were 44 candidates, including 2 females.

For the First L. M. S. examination held in March 1892, there were 35 candidates, including 1 female.

For the Combined Preliminary Scientific and First L. M. S. examinations held in March 1892, there were 3 candidates.

For the Second L. M. S. examination held in March 1892, there were 33 candidates.

For the Preliminary Scientific M. B. examination held in May 1891, there were 35 candidates, including 1 female, of whom 2 passed in the first division, 8 in the second (including one female), 1 was absent and 24 failed. Of the candidates who failed, 16 attained the Standard of the Preliminary Scientific L. M. S. examination, 10 of whom had already passed that examination.

For the First M. B. examination held in May 1891, there were 2 candidates, both of whom passed in the first division.

For the Combined Preliminary Scientific and First M. B. examination, there were 10 candidates, 1 of whom passed the Preliminary Scientific examination in the second division, and the first M. B. examination in the first division; 1 candidate obtained enough marks to pass the Preliminary Scientific and First L. M. S. examinations; 4 candidates attained the Standard of the Preliminary Scientific L. M. S. examination, 1 of whom had already passed that examination, 2 were absent, and 2 failed.

For the Second M. B. examination held in May 1891, there were 6 candidates, including 1 female, of whom 5 passed (including one female), and 1 failed. Of the successful candidates, 1 was placed in the first division, and 4 in the second.

For the examination for Honours in Medicine, there was only 1 candidate who passed.

For the examination for the degree of M. D. there was only 1 candidate who passed.

Examinations in Engineering.

There were 12 candidates for the First examination in Engineering, of whom 4 passed and 8 failed. All the successful candidates were placed in the second division. There were

8 candidates for the Licence in Engineering, of whom 3 passed, 4 failed, and 1 was absent. Of the successful candidates, 1 was placed in the First division and 2 in the Second. There were 4 candidates for the B. E. Examination, of whom 2 passed and 2 failed. Of the successful candidates 1 was placed in the First division and one in the Second.

Tagore Law Professorship.

At a meeting of the Senate, held on the 25th of April 1891, Maulavi Muhammad Yousuff, Khan Bahadur, was elected Tagore Professor of Law for the term of one year from the 1st of November 1891. The subject on which the Professor is delivering a course of lectures is the "Mahomedan Law relating to Marriage, Dower, Divorce, Legitimacy, and Guardianship of Minors, according to the Sunnis."

New Fellows

The following gentlemen were appointed Fellows of the University by His Excellency the Governor-General in Council in January 1892:—

Prince Jahan Kadr Mirza Muhammad Wahid Ali Bahadur.
Romesh Chunder Dutt, Esq., C.S.
Alexander Macdonell, Esq., M. A.
Maulavi Khoda Baksh, Khan Bahadur.
Rev. A. P. Begg, B. A.
Babu Kailaschandra Basu, L. M. S.
,, Upendranath Mitra, M. A., B. L.
,, Prannath Pandit, M. A., B. L.

The last two Fellows were under the orders of His Excellency the Chancellor, elected by the Masters of Arts and the Doctors in other Faculties.

They were distributed by the Syndicate as follows:—

Prince Jahan Kadr Mirza Muhammad Wahid Ali Bahadur.	In Arts.
Romesh Chunder Dutt, Esq., C. S.	In Arts.
Alexander Macdonell, Esq., M. A.	In Arts.
Rev. A. P. Begg, B. A.	In Arts.
Babu Upendranath Mitra, M. A., B. L.	In Arts.
,, Prannath Pandit, M. A., B. L.	In Arts.
Maulavi Khoda Baksh, Khan Bahadur.	In Law.
Babu Upendranath Mitra, M. A., B. L.	In Law.
,, Prannath Pandit, M. A., B. L.	In Law.
,, Kailaschandra Basu, L. M. S.	In Medicine.
Alexander Macdonell, Esq., M. A.	In Engineering.

The following Institutions have been affiliated in Arts and Law :—

In Arts.

Jaffna College	Up to the F. A. Standard.
Murarichand High School, Sylhet ...	
St. Mary's College, Chandernagore ...	
St. John's College, Jaffna ...	
New Holkar College	Up to the B. A. Standard.

In Law.

Midnapur College.

Changes in the Regulations.

The following additions and alterations in the Regulations have been sanctioned by the Senate and have been approved by His Excellency the Governor-General of India in Council :—

(1) In para. 7 B. of the B. A. Regulations for the words—
"III. Physics and the Elements of Chemistry as defined below : "
"IV. Chemistry and the Elements of Physics as defined below : "
Substitute the words "III. Physics and Chemistry as defined below."
For "III. and IV. The full course in Physics and Chemistry together with the Doctrine of Scientific Method " *read* "III. A fuller course in Physics and Chemistry, as defined below, together with the Doctrine of Scientific Method."
For "V." and "VI." *read* "IV. " and" V. "

(2) Under the head "Definition of Subjects, " substitute the following for "III., IV.—Physics and Chemistry, &c.—
"III.—Physics and Chemistry.
The Pass Course in Physics shall include—

(a) General Ideas—

1.—Wave motion :—
Measurement of simple or harmonic wave motions.
Combination of wave motions.
Resolution of complex wave motions into simple or harmonic wave motions.

2.—Potential :—
Definition of potential.
Calculation of potential in simple cases.
Determination of force from potential.
Fundamental propositions respecting lines of force, equipotential surfaces, and tubes of force.

3.—Elasticity :—
Definition of elasticity.
Measurement of elasticity in the cases of solids. liquids and gases.
Distinction between, and determination of, elasticity of constant temperature and of constant entropy for gases.

(b) Heat—

A more thorough acquaintance with the subject than that required for the First Arts Examination, and a greater power of working problems on heat.

(c) Light—

In this subject more difficult questions in the determination of foci, focal lengths, &c., will be required than for the First Arts Examination.

(d) Frictional Electricity—

This subject must now be taken up in connection with potential.

(e) Sound—

The laws of the production and propagation of sound determined experimentally.

Intensity, pitch, and quality of sounds.

The velocity of sound in air and other media : Dopplers' principle.

Reflection and refraction of sound.

Measurement of sound vibrations and wave lengths of air.

Resonance.

Interference of sound waves. Beats.

Harmonic tones; their generation and function in sound.

Longitudinal vibration of rods and of columns of air.

Transverse vibration of strings.

Formation of Chladni's figures.

Vibrations of tuning-forks and bells.

Nature of musical sounds.

Vocal organs of man.

(f) Dynamical Electricity—

Voltaic batteries as sources of electric currents.

Action of currents on magnetic needles. Galvanometers.

Thermo-electric currents.

Definition and measurement of electric force, conductivity, resistance, and current.

Ohm's law, and its simpler applications.

Laws of action of currents on currents, and their simpler applications

Solenoids. Ampère's theory of magnetism.

Electro-magnets.

Mechanical, chemical, and heating effects of currents. Electrolysis.

Induced currents, their modes of generation and laws of action.

Ruhmkorff's coil.

Electro-magnetic currents.

Electro-magnetic machines, the more important details of the working of telegraphs.

Theories of electricity.

(g) Magnetism—

Properties of permanent and artificial magnets.

Magnetic induction.

Phenomena of terrestrial magnetism.

Determination of declination, dip, and intensity of the magnetic force of the earth.

The compass needle.

Methods of magnetisation.

Determination of magnetic laws of action by the torsion balance

Magnetic potential.

(2) The Pass Course in Chemistry shall include—

(a) The following general considerations :—

Definition of Chemistry ; differences between chemical action and the action of the physical forces ; simple and compound matter ; different modes of chemical action ; principles of chemical nomenclature ; laws of chemical combination ; the atomic theory ; determination of molecular and atomic weights ; symbolic notation ; a fairly complete knowledge of atomicity or quantivalence,

artiads, perissads, &c. ; variations of atomicity ; absolute, latent, and active atomicity ; graphic notation ; chemical equations ; calculation of formulæ ; compound radicals ; classification of elements ; relations between atomic weight and quantivalence ; physical and chemical relations of atomic weights ; specific or atomic volumes ; molecular volumes ; chemical affinity ; influence of pressure on chemical action ; relations of heat to chemical affinity ; thermo-chemistry ; issomerism and allotropy ; solution.

(b) A fairly complete knowledge of the modes of occurrence, methods of preparation, properties, uses, and general characters of the following non-metallic elements, of their allotropic modifications and of their principal and best known compounds :—

Hydrogen, fluorine, chlorine, bromine, iodine.
Oxygen (and ozone).
Boron.
Carbon, silicon.
Nitrogen, phosphorus, arsenic.
Sulphur.

(c) A general knowledge of—

The distinction between metals and non-metals ; physical properties of metals ; chemical relations of metals ; alloys ; acids, bases, and salts ; the constitution of salts ; theory of normal, acid, and basic salts ; general characters and general methods of preparation of compounds of metals with non-metals ; the principles of crystallography ; isomorphism ; outline of the principles of qualitative analysis.

(d) A knowledge of the methods of preparation, properties, and uses of the following metals and principal salts :—

Sodium, potassium, ammonium, silver.
Calcium (glass manufacture, &c.), magnesium, zinc, copper, mercury.
Gold.
Lead, tin, platinum, aluminium (porcelain, pottery, &c.)
Antimony, bismuth.
Chromium, manganese, iron.

(3) The Honour Course in Physics shall include in addition to the subjects for the Pass Course—

(a) Heat—

An elementary knowledge of the principles of thermodynamics

(b) Light—

Spherical aberration.
Dispersion.
The formation of rainbows.

(c) Polarisation of Light—

Undulatory theory of light.
Reflection and refraction of light.
Prismatic analysis of light.
Achromatism.
Explanation of lines in the solar and other spectra.
Interference of light.
Diffraction of light.
Measurements of wave lengths of light.
Colours of thin plates.
Double refraction.
Polarization of light by reflection, refraction, and double refraction.
Interference of polarized light as shewn by double refracting crystals, Polariscopes.

Elliptic and circular polarization.
Rotary polarization.

(4) The Honour Course in Chemistry shall include in addition to a fuller knowledge of the subjects for the Pass Course—

Inorganic Chemistry—

(a) Study of the following elements :—

Selenium, tellurium, lithium, cæsium, rubidium, barium, strontium, the earth metals, cadmium, indium, gallium, titanium, vanadium, uranium, tungsten, molybdinum, nickel, cobalt, and the platinum metals

(b) A knowledge of the methods used in the preparation of the more important acids, salts, &c., employed in the arts and manufactures.

(c) A knowledge of metallurgical operations, such as are employed in the preparation of iron, zinc, copper, lead, tin, mercury, silver and aluminium.

Organic Chemistry—

(a) Definition of Organic Chemistry.

Constituents of organic bodies, synthesis from inorganic materials.
Sources of compounds, purification of compounds.
Determination of boiling point, melting point, and other physical properties of organic bodies.
Preparation of bodies for analysis.
Analysis of organic bodies, methods of determining empirical, molecular, and structural formulæ.
Detailed classification of organic bodies, homologous series.
Isomerism, including its various kinds.
Theory of organic radicals.

(b) A knowledge of the methods of preparation, properties and re-actions, together with the relations to one another, of a few typical bodies belonging to each of the various classes of organic compounds (excluding those belonging to the so-called aromatic series), derived from Hydrocarbons containing not more than five atoms of Carbon.

Practical Chemical Analysis.

A practical knowledge of the qualitative analysis of inorganic substances will be required. At the examination substances will be given for analysis containing not more than two acids and two bases."

These changes will come into operation in 1894.

(3) Add the following at the end of paras. 4, 10, and 18 of the Regulations for a Licence in Medicine and Surgery, and at the end of paras. 4, 10, and 15 of the Regulations for the Degree of Bachelor in Medicine :—

"provided he produces a certificate that he has, since the date of the last examination at which he presented himself, attended a regular course of instruction in the subject or subjects in which he failed at that examination."

(4) Add the following foot-notes to the same paragraphs to define the meaning of the term ." a regular course of instruction " :—

(a) To para. 4 of the L. M. S. Regulations and to para. 4 of the M. B. Regulations :—

" A regular course of instruction means attendance at one complete course of lectures, or in the case of Practical Chemistry, of Practical Chemical Exercises, as defined in para. 2."

(b) To para. 10 of the L. M. S. Regulations, and to para. 10 of the M. B. Regulations :—

" A regular course of instruction means attendance at one complete course of lectures, as defined in para. 8."

(c) To para. 18 of the L. M. S. Regulations :—

"A regular course of instruction in Medicine or Surgery means six months' attendance at a recognised hospital: in Midwifery, six months' attendance at an obstetric hospital, and presence at six Labours: in other subjects, attendance at one course of lectures, as defined in para. 16."

(d). To para. 15 of the M. B. Regulations :—

"A regular course of instruction in Medicine or Surgery means six months' attendance at a recognised hospital: in Midwifery, six months' attendance at an obstetric hospital, and presence at six Labours: in other subjects, attendance at one course of lectures, as defined in para. 13"

A candidate who has obtained the Licence in Medicine and Surgery, and who has been attached to a hospital or dispensary for six months since the date of his last appearance at the Second M, B. examination, will be held to have attended a regular course of instruction.

(4) In the F. A. application form for—

"*Period or periods of study since passing the Entrance Examination.*

Affiliated Institution or Itnstitutions at which the candidate has studied.	Period or Periods of continuous study	Signature* of Principa or Head Master of affiliated Institution.

* In the case of broken periods of study at different institutions, it is expected that Principals or Head Masters will satisfy themselves that the different periods of study amount in the aggregate to two years before admission to the Examination."

substitute the following :—

" *Particulars to be filled in by the Principal, &c.*

| *College or Colleges attended during the two years. | Date of Admission | Number of Lectures in | | |

delivered in the College during the two years, the lectures in each year being counted from the date on which the College opened after the summer vacation, and not from the date on which the student was admitted.

If a student has attended more than one College during the two years, the lectures in the College first attended must be counted from the beginning of the session to the date on which a Transfer Certificate is given; in the College or Colleges subsequently attended the lectures must be counted from the date of the Transfer Certificate on which the Student is admitted to the date on which a fresh Transfer Certificate is given, or to the date of application for admission to the F. A. Examination.

(*b*) This number must not include any lectures attended before the receipt of the Transfer Certificate.

5. In the B.A. application form for—

"*Period or periods of study since passing the First Examination in Arts.*

Affiliated Institution or Institutions at which the candidate has studied.	Period or periods of continuous study.	Signature of Principal or Head Master of affiliated Institution."

substitute the following:—

" *Particulars to be filled in by the Principal, &c.*

*College or Colleges attended during the two years.	Date of Admission.	Number of Lectures in					
		English.		Second Compulsory Subject (1.)		Optional Subject (1)	
		Delivered (a.)	Attended (b.	Delivered (a)	Attended (b.)	Delivered (a.)	Attended (b.)

Principal.

* The number of lectures delivered and attended in each College must be separately stated.

(1) The subject must be named.

(a) If a student has attended only one College during the two years of study required by the Regulations, this column must show the total number of lectures delivered in the College during the two years, the lectures in each year being counted from the date on which the College opened after the Summer vacation, and not from the date on which the student was admitted.

If a student has attended more than one College during the two years, the lectures in the College first attended must be counted from the beginning of the Session to the date on which a Transfer Certificate is given; in the College or Colleges subsequently attended, the lectures must be counted from the date of the Transfer Certificate on which the Student is admitted, to the date on which a fresh Transfer Certificate is given, or to the date of application for admission to the B. A. Examination.

(b) This number must not include any lectures attended before the receipt of the Transfer Certificate.

(6) In the B. L. application form after " Particulars to be filled in by the candidate.

Age.
Date of graduation.
Present occupation.
Religion.

add the following :—

"*Particulars to be filled in by the Principal.*

College or Colleges attended during the two years.	Date of Admission.	NUMBER OF LECTURES IN															
		1. The Principles of Jurisprudence, the History and Constitution of the Courts of Law and Legislative Authorities in India		2. The Law relating to persons in their Public and Private capacities including the Law of Testamentary Succession.		3. The Law of Property including the Law relating to Land Tenures and Revenue Laws.		4. The Law of Property including the Law of Transfer, Prescription ane Pre-emption.		5. The Law of Contracts and Torts.		6. The Law of Crimes and Criminal Procedure.		7. The Law of Civil Procedure including the Law of Evidence and Law of Limitation.		8. The Hindu Law and the Mahomedan Law (with the exception of parts already included) and the Law of Intestate Succession.	
		Delivered.	Attended (a)	Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a)	Delivered.	Attended (a.)	Delivered.	Attended (a.)	Delivered.	Attended (a.)

Principal.

* The number of lectures delivered and attended in each College must be separately stated.

(a) This number must not include any lectures attended before the receipt of the Transfer Certificate.

If a student has attended only one College during the two years of study required by the Regulations, this column must show the total number of lectures delivered in the College during the two years, the lectures in each year being counted from the date on which the College opened after the summer vacation, and not from the date on which the student was admitted.

If a student has attended more than one College during the two years, the lectures in the College first attended must be counted from the beginning of the Session to the date on which a Transfer Certificate is given ; in the College or Colleges subsequently attended the lectures must be counted from the date of the Transfer Certificate on which the student is admitted to the date on which a fresh Transfer Certificate is given, or to the date of application for admission to the B. L. Examination.

The following endowment has been made over to the University during the year :—

Endowment.

GOODEVE MEDAL.

The Joint Secretaries to the Goodeve Memorial Committee, on the 6th May, 1891, made over to the University a Government Promissory note for Rupees 500 on the following conditions :—

(1.) That an annual silver medal be instituted bearing the words " Goodeve Medal " on one side and the University Arms on the other.

(2.) That the medal be presented publicly every year at the annual Convocation for conferring degrees, to that student who obtains the highest number of marks in Medicine at the Second M. B. examination of the year.

(3.) That the names of the medallists be printed in the University Calendar.

His Excellency the Governor-General in Council re-appointed on the 1st of January, 1892, the Hon'ble Mr. Justice Gooroo Dass Banerjee, D. L., to be Vice-Chancellor of the University.

At their meeting on the 25th April, 1891, the Senate appointed Mr. A. M. Nash to be Registrar of the University for a period of two years, from the 1st of May, 1891.

Two incidents in connection with the recent Entrance examination, which engaged the serious attention of the Syndicate, and to some extent exercised the Public mind, deserve a passing notice. The one is the theft of the question papers at Patna before the commencement of the examination, and the other is the attempt on the part of a candidate named Haradhan *alias* Rakhaldas Ghosh to palm over a false certificate purporting to have been signed by the Head Master of a Zila School, in support of his

application for admission to the examination. The circumstances under which the examination papers were stolen, while they were in custody of Mr. Ewbank, the officer in charge of the examination at Patna, are detailed in his report. After a careful consideration of the matter by the Syndicate and Senate, it was decided that the original examination held at Patna be cancelled, and that a fresh examination be held of all candidates examined at that centre, commencing on the 4th April. As a precaution against such theft of examination papers, the Syndicate have further resolved not to hold the University examinations at any centre, unless the superintendent at that centre can satisfy the Syndicate that the arrangements for the safe custody of the examination papers are sufficient, and have also, on the recommendation of a Committee appointed for the purpose, reduced the list of centres by removing from it those whose distance from the Metropolis renders the transit of the examination papers to such centres inexpedient and unsafe. Criminal proceedings were instituted against Haradhan *alias* Rakhaldas Ghosh for uttering a forged document and attempting to cheat the University, but it was decided by the High Court that the offence committed by the candidate was not punishable under the law. The Syndicate have, however, punished the offender by declaring him ineligible for admission to any of the examinations of the University, and the question of preventing the commission of such offences in future is now engaging the attention of the Syndicate.

Accounts

A Statement of Receipts and Disbursements from 1st April, 1891, to 31st March, 1892, is subjoined

Statement of Receipts and Disbursements of the Calcutta University from 1st April, 1891, to 31st March 1892.

RECEIPTS.

	Rs	As.	P.	Rs	As.	P.
Fees for the Entrance Examination ..	52,090	0	0			
,, First Arts ditto ...	49,780	0	0			
,, B. A. ditto ..	37,050	0	0			
,, M. A. ditto ...	6,700	0	0			
,, B. L. ditto ...	5,490	0	0			
,, Honours in Law do. ..	300	0	0			
,, Preliminary Sc. L. M S.	440	0	0			
,, Combined Preliminary Sc. and 1st L. M. S. ...	75	0	0			
,, First L. M. S. ditto ...	525	0	0			
,, Second L. M. S. ditto ...	825	0	0			
,, Prel. Sc. M. B. ditto ...	350	0	0			
,, First M. B. ditto ...	30	0	0			
,, Combined Preliminary ... Scientific and 1st M. B.	250	0	0			
,, Second M. B. ditto ...	180	0	0			
,, Honours in Medicine ...	50	0	0			
,, M. D. ditto ...	100	0	0			
,, F. E. ditto ...	240	0	0			
,, L. E. ditto ...	200	0	0			
,, B. E. ditto ...	120	0	0			
				1,54,795	0	0
Duplicate Fees	.....			314	0	0
Fees for copy of marks	.....			664	0	0
Contribution to Gown Fund ...	.....			125	0	0
English Entrance Course Royalty ...	.....			11,556	0	0
Sale proceeds of Calendar and Minutes	.....			2,987	8	0
Ditto Sanskrit and Bengali Selections	.....			8,630	4	0
Miscellaneous...	.....			230	0	0
Total Revenue ..	.....			1,79,301	12	0
Balance on the 1st April, 1891	.....			60,895	2	5
Grand Total ..	.....			2,40,196	14	5

DISBURSEMENTS.

	Rs	As.	P.	Rs	As.	P.
Salaries & Permanent Establishment ..	13,491	4	5			
Pension	336	0	0			
Contingencies	602	7	5			
Remuneration to Examiners ...	54,401	6	3			
Municipal Taxes ...	1,170	0	0			
Examination Expenses ...	6,244	8	4			
Bonuses	2,055	0	0			
Prizes and Medals	2,508	15	4			
Service labels	1,200	0	0			
Stationery	464	12	0			
Printing Minutes	1,853	8	0			
,, Calendar ..	1,311	10	0			
,, Sanskrit and Bengali Selections	281	5	6			
,, Examination Papers ..	5,493	10	3			
Miscellaneous printing expenses ...	3,007	10	0			
Reporter's fees	125	0	0			
New books purchased	694	3	6			
Refund of Fees	62	0	0			
Fee for auditing accounts ...	250	0	0			
Commission to Messrs. Thacker, Spink & Co. on the University publications	1,012	3	0			
Addition to University Building ...	9,144	0	0	1,05,709	8	0
Contribution to the Reserve Fund ...	.....			16,658	3	9
Balance on the 31st March, 1892 ...	.....			1,17,829	2	8
Grand Total ...	.....			2,40,196	14	5

Statement of Securities in custody of the Bank of Bengal on account of Premchand Roychand Studentship Fund.

4 per cent. reduced Loan	of 1879,	No. 53	Book Debt,	Rs.	2,16,000
„ „	of 1865	„ 172	„	„	5,000
„ „	of 1865	„ 460	„	„	8,000
„ „	of 1865	„ 961	„	„	9,000
				Rs.	2,38,000

Dr. *Account, Premchand Roychand Studentship Fund.* *Cr.*

	Rs	As	P		Rs	As	P	Rs	As	P
To Balance on the 31st March, 1891 ..	11,419	2	0	By the stipends of students ...	4,800	0	0			
„ Interest	9,520	0	0	„ Commission	23	12	11			
„ Studentship Examiniation fees ...	160	0	0	„ Remuneration to Examiners	2,520	0	0			
								7,343	12	11
				Balance in the Bank	...			13,755	5	1
TOTAL Rs ...	21,099	2	0	TOTAL Rs ...				21,099	2	0

Statement of Securities in custody of the Bank of Bengal on account of Duff Memorial Fund.

4 per cent. reduced Loan	of 1879,	No. 51	Book Debt,	Rs.	2,500
„ „	of 1865	„ 171	„	„	18,000
„ „	of 42-43	„ 112	„	„	1,500
„ „	of 1854-55		„	„	3,000
„ „	of 1865	„ 975	„	„	2,000
				Rs.	27,000

Dr. *Account, Duff Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P	Rs	As	P
To Balance on the 31st March, 1891 ...	784	5	5	By Scoarships ...	1,035	0	0			
„ Interest	1,080	0	0	„ ComBission ...	2	11	0			
								1,037	11	0
				Balance in the Bank ...	...			826	10	5
TOTAL Rs ...	1,864	5	5	TOTAL Rs ...	...			1,864	5	5

Statement of Securities in custody of the Bank of Bengal on account of Tagore Law Professorship Fund
7/4 per cent Loan of 1865, No. 170, Book Debt, Rs 300,000.

Dr. *Account, Tagore Law Professorship Fund.* *Cr.*

	Rs	As	P		Rs	As	P	Rs	As	P
To Balance on the 31st March, 1891 ...	8,250	6	0	By Professor's salary ...	7,500	0	0			
,, Interest	12,000	0	0	,, Commission... ...	30	0	0			
				,, Advertisements ...	97	7	6			
				,, Service labels ...	100	0	0			
				,, Printing Tagore Lectures for 1888 and 1889 ...	2,687	4	0			
				,, Freight	51	13	6			
								10,466	9	0
				Balance in the Bank ...	.....			9,783	13	0
TOTAL Rs ...	20,250	6	0	TOTAL Rs ...	..			20,250	6	0

Statement of Securities in custody of the Bank of Bengal on account of Eshan Scholarship Fund
4 per cent. reduced Loan of 1879, No. 52, Book Debt, Rs. 12,000
7/4 ,, ,, of 1865, ,, 173 ,, ,, 500
5/4 ,, ,, of 42-43 ,, 113 ,, ,, 500

Rs 13,000

Dr. *Account, Eshan Scholarship Fund.* *Cr*

	Rs	A	P		Rs	As	P
To Balance on the 31st March, 1891 ...	926	5	0				
,, Interest	520	0	0	By Commission	1	4	10
				Balance in the Bank ...	1,445	0	2
TOTAL Rs ...	1,446	5	0	TOTAL Rs ...	1,446	5	0

Dr. *Account, Library Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	2	1	3	By books	2	1	3
				Balance in the Bank ...	0	0	0
				TOTAL ...	2	1	3

Statement of Securities in custody of the Bank of Bengal on account of Rádhákánta Memorial Fund.
5 per cent. Municipal Debentures of 1890-91, Nos. 154 and 155, at Rs. 1,000 each, Rs. 2,000.

Dr. *Account, Rádhákánta Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	407	9	9	By Commission	0	6	5
„ Interest	60	0	0	„ Mint Master for gold medal	115	2	3
„ Encashment of 6 per cent. Municipal Debentures for Rs. 2,000 ...	2,060	0	0	„ Cost of 5 per cent. Municipal Debentures for Rs. 2,000	2,266	12	3
				Balance in the Bank	145	4	10
TOTAL Rs. ...	2,527	9	9	TOTAL Rs ...	2,527	9	9

Statement of Securities in custody of the Bank of Bengal on account of Mouat Testimo Fund

5 per cent. Municipal Debenture of 1884-85,	No. 669,	Rs. 1,000
" " " "	No. 704	500
		Rs 1,500

Dr. *Account, Mouat Testimonial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	153	10	6	By Commission	0	3	0
" Interest	75	0	0	Mint Master for gold medal	113	1	11
				Balance in the Bank ...	115	5	7
TOTAL Rs ...	228	10	6	TOTAL Rs ...	228	10	6

Statement of Securities in custody of the Bank of Bengal on account of Ritchie Memorial Fund.

5/4 per cent. loan of 1842-43,	No. 48 Book Debt,	Rs. 1,100
4 " " of 1865,	No. 976 " "	400
		1,500

Dr. *Account, Ritchie Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	107	8	5	By Commission	0	2	6
" Interest	60	0	0	" Prize	60	0	0
				Balance in the Bank ...	107	5	11
TOTAL Rs ...	167	8	5	TOTAL Rs ...	167	8	5

Statement of Securities in custody of the Bank of Bengal on account of Harischandra Prize Fund.

5 per cent. Municipal Debenture of 1884-85, No. 602, Rs. 2,000.

5 per cent. Municipal Debenture of 1878, No. 113, Rs. 500.

Dr. *Account, Harischandra Prize Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	75	11	8	By Commission	0	12	0
„ Interest	125	0	0	Balance in the Bank ...	199	15	8
TOTAL Rs ...	200	11	8	TOTAL Rs ...	200	11	8

Statement of Securities in custody of the Bank of Bengal on account of Woodrow Memorial Scholarship Fund.

5/4 per cent. loan of 1842-43, No. 47, Book Debt, Rs. 4,800.

Dr. *Account, Woodrow Memorial Scholarship Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	298	7	10	By Commission	0	7	8
„ Interest	192	0	0	„ Scholarships	192	0	0
				Balance in the Bank ...	298	0	2
TOTAL Rs ...	490	7	10	TOTAL Rs ...	490	7	10

Statement of Securities in custody of the Bank of Bengal on account of Herschel Testimonial Fund.

7/4 per cent. loan of 1865, No. 218, Book Debt, Rs 1,800.

Dr. *Account, Herschel Testimonial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	0	0	0	By Commission	0	2	10
„ Interest	72	0	0	„ Mint Master for gold medal ...	71	13	2
				Balance in the Bank ...	0	0	0
TOTAL Rs ...	72	0	0	TOTAL Rs ...	72	0	0

Statement of Securities in custody of the Bank of Bengal on account of Pacheti Sanskrit Prize Fund.

4 per cent. loan of 1854-55, No. Book Debt, Rs 2,000.

Dr. *Account, Pacheti Sanskrit Prize Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st of March, 1891 ...	170	13	3	By Commission	0	3	2
„ Interest	80	0	0	„ Prize	90	0	0
				Balance in the Bank ...	160	10	1
TOTAL Rs ...	250	13	3	TOTAL Rs ...	250	13	3

Statement of Securities in custody of the Bank of Bengal on account of Dwarkanath Memorial Fund.

7/4 per cent. loan of 1865, No. 363, Book Debt, Rs 500.

5/4 „ „ 1842-43, „ 99 „ 5,000——5,500.

Dr. *Account, Dwarkanath Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st of March, 1891 ...	439	13	2	By Scholarships	220	0	0
„ Interest	220	0	0	„ Commission	0	8	10
				Balance in the Bank ...	439	4	4
TOTAL Rs ...	659	13	2	TOTAL Rs ...	659	13	2

Statement of Securities in custody of the Bank of Bengal on account of Sir J. M. Tagore's Medal Fund.

5/4 per cent. loan of 1842-43, No. 105, Book Debt, Rs 3,500.

Dr. *Account, Maharaja Sir J. M. Tagore's Medal Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st of March 1891 ...	126	6	4	By Commission	0	5	8
„ Interest	140	0	0				
				Balance in the Bank ...	266	0	8
TOTAL Rs ...	266	6	4	TOTAL Rs ...	266	6	4

Statement of Securities in custody of the Bank of Bengal on account of McCann Memorial Fund.
7/4 per cent. loan of 1865, No. 558, Book Debt, Rs 500.

Dr. *Account, McCann Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	44	10	5	By Commission	0	0	10
„ Interest	20	0	0	„ Mint Master for medal	19	7	0
				Balance in the Bank ...	45	2	7
TOTAL Rs ...	64	10	5	TOTAL Rs ...	64	10	5

Statement of Securities in custody of the Bank of Bengal on account of University Reserve Fund.

4 per cent. loan of 1865, No. 483, Book Debt, Rs					12,500.	4 per cent. loan of 1865, No. 896, Book Debt, Rs					10,000
„	„	„	684,	„	„ 15,000.	„	„	„	936,	„	„ 20,000.
„	„	„	792,	„	„ 12,500.	„	„	„	960,	„	„ 20,000.
„	„	„	856,	„	„ 10,000.	„	„	„	3,17,144	„	„ 25,000.
											Rs 1,25,000

Dr. *Account, University Reserve Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	5,985	0	0	By Commission	10	0	0
„ Interest	4,000	0	0	„ Cost of Government Securitiy ...	26,633	3	9
„ Contribution from the Fee Fund ...	16,658	3	9	Balance in the Bank ...	0	0	0
TOTAL Rs ...	26,643	3	9	TOTAL Rs ...	26,643	3	9

Statement of Securities in custody of the Bank of Bengal on account of Saradaprasad Memorial Fund.

4 per cent. loan of 1842-43, No. 143, Book Debt, Rs. 5,000.
" " " 162, " " 3,500.

Rs. 8,500.

Dr. *Account, Saradaprasad Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	1,109	13	1	By Commission	0	13	8
" Interest	340	0	0	" Scholarships	30	0	0
				" Prize	150	0	0
				Balance in the Bank ...	1,268	15	5
TOTAL Rs ...	1,449	13	1	TOTAL Rs ...	1,449	13	1

Statement of Securities in custody of the Bank of Bengal on account of Peary Chand Mitter Memorial Fund.

7/4 per cent. loan of 1865, No. 681, Book Debt for Rs. 500.

Dr. *Account, Peary Chand Mitter Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	43	0	9	By Commission	0	0	10
" Interest	20	0	0	" Mint Master for medal	19	7	0
				Balance in the Bank ...	43	8	11
TOTAL Rs ...	63	0	9	TOTAL Rs ...	63	0	9

Statement of Securities in custody of the Bank of Bengal on account of Hemantakumar Memorial Fund.
4 per cent. loan of 1865, No. 815, Book Debt for Rs. 2,500.

Dr. *Account, Hemantakumar Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	2	2	0	By Commission	0	4	0
„ Interest	100	0	0	„ Mint Master for medal	101	14	0
				Balance in the Bank ...	0	0	0
TOTAL Rs ...	102	2	0	TOTAL Rs ...	102	2	0

Statement of Securities in custody of the Bank of Bengal on account of Padmavati Medal Fund.
4 per cent. loan of 1865, No. 914, Book Debt for Rs. 2,500.

Dr. *Account, Padmavati Medal Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	87	1	6	By Commission	0	4	0
„ Interest	100	0	0	„ Mint Master for Medal	129	14	4
				Balance in the Bank ...	56	15	2
TOTAL Rs ...	187	1	6	TOTAL Rs ...	187	1	6

Statement of Security in custody of the Bank of Bengal on account of Sonamani Prize Fund.

4 per cent. loan of 1865, No. 2,88,876 for Rs. 1,000.

Dr. *Account, Sonamani Prize Fund.* *Cr.*

	Rs	A	P		Rs	As	P
To Balance on the 31st March, 1891 ...	36	10	10	By Commission	0	1	8
„ Interest	40	0	0	„ Prize...	76	9	2
				Balance in the Bank ...	0	0	0
TOTAL Rs ...	76	10	10	TOTAL Rs ...	76	10	10

Statement of Security in custody of the Bank of Bengal on account of Philip Smith Memorial Fund.

4 per cent. loan of 1842-43, No. 097,172 Book Debt Rs 1,000.

Dr. *Account, Philip Smith Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	39	14	4	By Commission	0	1	8
„ Interest	40	0	0	„ Prize	39	14	4
				Balance in the Bank ...	39	14	4
TOTAL Rs ...	79	14	4	TOTAL Rs ...	79	14	4

Statement of Security in custody of the Bank of Bengal on account of Jaynarayan Prize Fund
4 per cent. loan of 1854-55, No. 061,435 Rs 500.

Dr. *Account, Jaynarayan Prize Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	19	11	7	By Commission	0	0	10
„ Interest	20	0	0	„ Prize	9	13	9
				Balance in the Bank ...	29	13	0
TOTAL Rs ...	39	11	7	TOTAL Rs ...	39	11	7

Dr. *Account, Ambikacharan Chaudhuri's Medal Fund.* *Cr.*

	Rs	As	P		Rs	As	A
To Balance on the 31st March, 1891 ...	112	10	0	By Messrs. Hamilton & Co. for Medal ...	48	0	0
„ Interest from the Acct. General Bengal...	55	13	10	Balance in the Bank ...	120	7	10
TOTAL Rs ...	168	7	10	TOTAL Rs ...	168	7	10

Statement of Security in custody of the Bank of Bengal on account of Trevor Testimonial Fund.
4 per cent. loan of 1842-43, No. Rs 1,400.

Dr *Account, Trevor Testimonial, Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	15	9	8	By Commission	0	2	2
„ Interest	56	0	0	„ Mint Master for medal	71	7	6
				Balance in the Bank ...	0	0	0
TOTAL Rs ...	71	9	8	TOTAL Rs ...	71	9	8

Statement of Securities in custody of the Bank of Bengal on account of Kesab Memorial Fund.

4 per cent. loan of 1842-43,	Nos. C142534 C114671	Rs.	5,000
" "	No. 166965	"	2,000
" "	No. 181421	"	1,000
		"	8,000

Dr. *Account, Kesab Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	211	9	7	By Commission	0	12	10
" Interest	320	0	0	" Mint Master for medal	113	10	6
				" Prize in money and books	240	0	0
				Balance in the Bank ...	177	2	3
TOTAL Rs ...	531	9	7	TOTAL Rs ...	531	9	7

Statement of Securities in custody of the Bank of Bengal on account of Prasannakumar Sarbadhikari Memorial Fund.

5 per cent. Municipal debentures,	No. 186, dated 1st February, 1885	Rs.	1,000
" " "	No. 536, dated 1st September, 1885	"	500
		"	1,500

Dr. *Account, Prasannakumar Sarbadhikari Memorial Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	0	0	0	By Commission	0	10	0
" Interest	85	14	7	" Mint Master for medal	98	5	7
" Cash from Babu Nilmani Mukerjee ...	25	0	0	Balance in the Bank ...	11	15	0
TOTAL Rs ...	110	14	7	TOTAL Rs ...	110	14	7

Statement of Security in custody of the Bank of Bengal on account of Goodeve Memorial Fund.
4 per cent. loan of 1865, No. 254906, for Rs 500.

Dr. *Account, Goodeve Fund.* *Cr.*

	Rs	As	P		Rs	As	P
To Balance on the 31st March, 1891 ...	0	0	0	By Commission	0	4	5
„ Interest	78	2	10	„ Mint Master for medal	77	14	5
				Balance in the Bank ...	0	0	0
TOTAL Rs ...	78	2	10	TOTAL Rs ...	78	2	10

The Syndicate for the ensuing year is constituted as follows :—

Charles H. Tawney, Esq., M.A., C.I.E. The Hon'ble Mahendralal Sircar, M.D., C.I.E. A. M. Bose, Esq., M.A. C. E. Buckland, Esq., B.A, C.S. Babu Asutosh Mukhopadhyay, M.A., F.R.A.S., F.R.S.E.	in Arts.
The Hon'ble Mr. Justice Ameer Ali, M.A., B.L., C.I.E. Babu Mohinimohan Ray.	in Law.
J. F. P. McConnell, Esq., M.D., F.R.C.S. Maulavi Zahiruddin Ahmed, L.M.S	in Medicine.
C. W. Odling, Esq. M.E., M.I.C.E.	in Engineering.

The constitution of the Faculties for 1891-92 was as follows :—

ARTS.

President :

THE HON'BLE SIR ALFRED CROFT, M.A., K.C.I.E.

Members :

The Hon'ble the Lieutenant-Governor of Bengal.
The Hon'ble the Lieutenant-Governor, North-Western Provinces, and Oudh.
The Hon'ble the Lieutenant-Governor of the Panjab.
The Right Rev. the Lord Bishop of Calcutta.
The Hon'ble Sir David Barbour, K.C.S.I.
The Hon'ble Sir P. P. Hutchins, K.C.S.I.
Nawab Abdool Luteef Bahadur, C.I.E.
Rai Jagadananda Mookerjee, Bahadur.
Babu Bhudeb Mookerjee, C.I.E.
Rev. J. P. Ashton, M.A.
J. Sime, Esq., B.A.
Charles H. Tawney, Esq., M.A, C.I.E.
A. O. Hume, Esq., C.B.
Raja Sivaprasad, C.S.I.
The Hon'ble Mahendralal Sircar, M.D., C.I.E.
Rai Kanailal De Bahadur, F.C.S., C.I.E.
J. Beames, Esq., C.S.
Col. H. S. Jarrett.
G. King, Esq., M.B., LL.D., F.L.S., F.R.S., C.I.E.
Maharaja Durgacharan Law, C.I.E.
Babu Gaurdas Basak.
K. McLeod, Esq., M.A., M.D., F.R.C.S.
Babu Krishnakamal Bhattacharyya, B.L.
Babu Omeshchunder Dutt.
The Hon'ble J. O'Kinealy, M.A., LL D., C.S.
M. S. Howell, Esq., C.S., LL.D., C.I E.
Maharaja Sir Jotindramohan Tagore, Bahadur, K C.S.I.
Raja Jaykissen Das, Bahadur, C.S.I.
J. C. Nesfield, Esq, M.A.

Sir Syed Ahmed, LL.D., K.C.S.I.
The Hon'ble Baba Khem Singh Bedi, C.I.E.
Sir Alexander Mackenzie, B.A., K.C.S.I.
D. D. Cunningham, Esq., M.B., F.R.S.
The Hon'ble Ameer Ali, M.A., B.L, C.I.E.
Nawab Ashgar Ali, Khan Bahadur, Diler Jung, C.S.I.
J. Eliot, Esq., M.A.
Mahamahopadhyay Mahesachandra Nyayaratna, C.I.E.
Rev. Lalbihari Day.
The Very Rev. Father E. Lafont, S J., C.I.E.
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W. C. Bonnerjee, Esq.
Raja Sir Saurindramohan Tagore, Kt., Mus. Doc., C.I.E.
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A. F. Rudolf Hoernle, Esq., M.A., Ph. D
Babu Trailokyanath Mitra, M.A., D.L.
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F. J. Rowe, Esq., M.A.
The Hon'ble Rashbehary Ghosh, M.A., D.L.
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A Ewbank, Esq M. A.

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Rai Radhikaprasanna Mukerjee, Bahadur.
Rai Bankimchandra Chatterjee, Bahadur, B.L.
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Rev. J. Hector, M. A
Babu Bholanath Pal, M.A.
The Hon'ble Rai Lakshmi Sankar Misra, Bahadur, M.A.
Babu Nilmani Mukerjee, M.A., B L.
Maulavi Abdul Hai.
Babu Saradacharan Mitra, M A., B.L.
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Shams-ul-Ulama Ahmad.
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Maulavi Ashrafuddin Ahmad.
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Babu Bipinbihari Gupta, M.A.
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Babu Sambhuchandra Mukerjee.
Rai Gunabhiram Barua, Bahadur.
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Babu Mahendranath Ray, M.A., B L.
Prince Jehan Kadr Mirza Muhammad Wahid Ali, Bahadur
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Alexander Macdonell, Esq., M.A.
Rev. A. P. Begg, B.A.
Babu Upendranath Mitra, M.A., B.L.
Babu Prannath Pandit, M.A.,B.L.

LAW.

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Rai Rajkumar Sarbadhikari, Bahadur, B.L.
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Nagendranath Ghose, Esq.
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Babu Durgamohan Das.
Babu Srinath Das.
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The Hon'ble Ganeschandra Chandra.
The Hon'ble J. F. Norris, Q.C.
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Babu Mahendranath Ray, M.A., B.L.
Maulavi Khoda Baksh, Khan Bahadur
Babu Upendranath Mitra, M.A., B.L.
Babu Prannath Pandit, M.A., B.L.

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E. A. BIRCH, ESQ., M.D.

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J. Scully, Esq. L.R.C.P., M.R.C.S.
Maulavi Zahiruddin Ahmed, L.M.S.
J. Wood-Mason, Esq.

A. Crombie, Esq., M.D.
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Babu Kailaschandra Basu, L.M.S.

ENGINEERING.

President:

COLONEL J. M. MCNEILE, R.E.

Members:

His Excellency the Commander-in-Chief of the Forces in India G.C.B., G.C.I.E., R.A.
The Hon'ble General Henry Brackenbury, C.B., R A.
The Hon'ble Colonel R. C. B. Pemberton, R.E.
The Hon'ble Mahendralal Sircar, M.D., C.I.E.
The Hon'ble Sir Alfred Croft, M.A., K.C.I.E.
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J. S. Slater, Esq.
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J. H. Apjohn, Esq., M.A., M.I.C.E.
C. Little, Esq., M.A.
A. Macdonell, Esq., M.A.

The undermentioned gentlemen conducted the University examinations for the year 1891-92.

Entrance Examination.

English ... ... The Rev. A. P. Begg, B.A., *Head Examiner.*
Mr. W. Billing, B.A.
Mr C. F. De la Fosse,
Mr. J. N. Farquhar, B.A.
Rev. A.B. Wann.
Mr. G. A. Lorimer, M.A.
Mr. H. Godfree.

English.	Rev. A. Tomory, M.A. Mr. E. M. Wheeler, M.A. Mr. Zahhadur Rahim Zahid. Babu Jnanranjan Banerjee, M.A. Babu Debendranath Basu, M.A. Babu Herambachandra Maitra, M.A. Babu Upendranath Maitra, M.A. Babu Matilal Chatterjee, M.A. Babu Lalitkumar Banerjee, M.A.
Mathematics.	Mr. W. Booth, M.A., *Head Examiner.* Mr. A. Thomson, M.A. Babu Baidyanath Basu, M.A. Babu Kalipada Basu, M.A. Babu Abinaschandra Basu, M.A. Babu Narendralal De, M A. Babu Rajmohan Sen, M.A. Babu Bipinbihari Gupta, M.A. Babu Kshetramohan Banerjee, M.A. Babu Kaliprasanna Chattoraj, M.A. Babu Suryyakumar Karfarma, M.A. Babu Mohinimohan Chaudhuri, M.A. Babu Haridas Gargari, M.A. Babu Jyotiprasad Chatterjee, M.A. Babu Hemendranath Mitra, M.A.
Sanskrit and Bengali. ...	Babu Krishnakamal Bhattacharyya, B.A., *Head Examiner.* Babu Saradacharan Mitra, M.A., *Set the Bengali paper.* Pandit Sibanath Sastri, M.A. Babu Kailaschandra Bhattacharyya, M.A. Babu Kaliprasanna Bhattacharyya, M.A. Babu Harimohan Vidyabhushan. Babu Nakuleswar Banerjee. Babu Ramkumar Chakrabarti. Babu Baradakanta Vidyaratna. Babu Narayanchandra Battacharyya, M.A. Babu Saratchandra Gupta, M A. Babu Matilal Bhattacharyya, M.A. Babu Janakinath Bhattacharyya, M.A. Babu Bidhubhushan Goswami, M.A.
History	Mr. M. Prothero, M.A., *Set the papers.* Mr. H A. Bamford, *Head Examiner* Babu Kunjabihari Basu, M.A. Babu Isanchandra Ghosh, M.A. Babu Binayendranath Sen, M.A Babu Ambikacharan Mitra, M.A. Babu Sibchandra Gui, M.A. Mr. Abdul Haq Abid, B.A.

History	Babu Adharchandra Mukerjee, M.A. Babu Grischandra Nag, M.A.
Geography	Babu Hridaychandra Banerjee, M.A. Babu Brajaballabh Datta, M.A. Babu Gobindachandra Das, M.A. Babu Jnanchandra Ghosh, M.A. Babu Kumudinikanta Banerjee, M.A. Babu Jibanchandra Mukerjee, M.A. Babu Ramendrasundar Trivedi, M.A. Babu Dhanballabh Set, M.A.
Latin	Mr. M. A. Stein, Ph. D.
Greek	Mr. C. H. Tawney, C I.E.
French	Rev. V. de Campigneulles, S.J.
Hebrew	Mr. E. M. D. Cohen
Persian	Shams-ul-Ulama Shaikh Mahmud Gilani.
Arabic	Col. H. S. Jarrett.
Urdu	Maulavi Shams-ul-Huda, M.A.
Hindi	Babu Kanhailal Sastri.
Uriya	Babu Ramprasanna Mukherjee.
Burmese	Mr. A. W. Lonsdale.
Armenian	Mr. T. Stephen.
Assamese	Rai Gunabhiram Barua, Bahadur.
Khasia	Rev. J. Roberts
Parbatia	Babu Kedarnath Chatterjee.
Mahrathi	Mr. Mahadeo Yeshwant Dole.
Gujrathi	Mr. D. D. Mehta.
Tamil	Mr. R. Dhanasukati.
Telugu	Mr. C. Narayan Swami.
Drawing	Mr. W. H. Jobbins.

F. A. Examination.

English	Mr. W, T. Webb, M.A., *Set the papers.* Mr. N. L. Hallward. H. R. James, M.A. Rev. K. S. Macdonald, M.A., D.D. Mr. W. B. Livingstone. Babu Asutosh Mukerjee (Sr.), M.A. Mr. Abdur Rahim, M.A.
Mathematics	Mr. W. Booth, M A. } *Set the papers* Babu Asutosh Mukhopadhyay, M.A. } *Set the papers* Mr. G. W. Küchler, M.A. Mr. J. H. Gilliland, B.A. Mr. C. Little, M.A. Babu Gaurisankar De, M.A. Babu Mahendranath Ray, M.A. Mr. W. E. K. Shore, B.A.

Sanskrit	Babu Haraprasad Sastri, M.A. } *Set the papers.* Babu Rajendra Chandra Sastri, M.A. } Babu Kailaschandra Datta, M.A. Babu Haridas Sastri, M.A. Babu Nilmani Mukerjee, M.A. Babu Nrisinhachandra Mukerjee. M.A. Babu Bireswar Chatterjee, M.A. Babu Umacharan Banerjee, M.A.
Bengali	Babu Saradacharan Mitra, M A.
Arabic	Col. H. S. Jarrett.
Persian	Shams-ul-Ulama Maulavi Ahmed.
Latin	Mr. M. A. Stein, Ph. D.
Greek	Mr. C. H. Tawney, M.A , C.I.E.
French	Rev. V. de Campigneulles, S.J.
Pali	Mr. J. Gray.
Physics	Mr. P. Bruhl., *Set the papers.* The Very Rev. E. Lafont, S.J. Mr. A. Macdonell, M.A Mr. A. Ewbank, M.A,
Chemistry	Rai Taraprasanna Ray, Bahadur. } *Set the paper.* Mr. W. McMillan. Mr. A. Pedler, F.C.S. Dr. P. C. Roy.
Botany	Dr. D. Prain.
History	Mr. H. M. Percival, M.A., *Set the paper.* Dr. A. F. R. Hoernle. Mr. N. N. Ghose. Babu Kalisankar Sukul, M.A.
Logic	Mr. A. Venis, M.A., *Set the papers.* Babu Nilkanta Majumdar, M.A. Babu Brajendranath Sil, M.A. Babu Syamacharan Ganguli, B.A

B. A. Examination.

English	Mr. K. Deighton, M.A. } *Set the papers* Mr. C. R. Wilson, M.A. } Mr. C. H. Tawney, M.A.C.I.E. Mr. F. J. Rowe, M.A. Mr. H. M. Percival, M.A.
Philosophy	Rev. H. Whitehead, M.A. Babu Kalicharan Banerjee, M.A. Dr. P. K. Ray. Mr. H. Stephen. Mr, A. Venis, M.A.
Mathematics	W. Booth, Esq. Babu Asutosh Mukhopadhyay, M.A. } *Set the papers.* Mr. W. Griffiths, M.A. }

Latin	Mr. F. J. Rowe. M.A.
Greek	Mr. C. H. Tawney, M.A., C.I.E.
French	Miss Adams.
History	Mr. J. H. Stone.
Sanskrit	Babu Haraprasad Sastri, M.A. Babu Rajendrachandra Sastri, M.A.
Arabic	Col. H. S. Jarrett.
Persian	Maulavi Abul Khair Muhammed Siddiq, M.A. Shams-ul-Ulama Maulavi Ahmad,
Physics	Mr. P. Brühl.
Chemistry	Rai Taraprasanna Ray, Bahadur, F.C.S.
Physiology and Botany ...	Mr. J. Wood-Mason. Dr. D. Prain.

M. A. Examination.

English	Mr. K. Deighton, M.A., *Set the papers.* Mr. C. H. Tawney, MA., C.I.E. Mr. M. J. White, M.A. Mr. A. C. Edwards, M.A. Mr. H.M. Percival, M.A.
Latin	Very Rev. Fr. Neut, S.J. Mr. H. Stephen, M.A.
Sanskrit	Mahamahopadhyay Chandrakanta Tarkalankar. Babu Krishnakamal Bhattacharyya, B.A. Babu Nilmani Mukerjee, M.A. Dr. A. F. R. Hoernle.
Arabic	Col H. S. Jarrett.
Persian	Shams-ul-Ulama Shaikh Mahmud Gilani.
Mathematics	Babu Asutosh Mukhopadhyay, M.A., F.R.A.S., F.R.S.E. Mr. W. Booth, M.A
History	Mr. M. Prothero, M.A.
Philosophy	Babu Kalicharan Banerjee, M,A. Dr. G. Thibaut.
Chemistry	Rai Taraprasanna Ray Bahadur Mr. W. McMillan.
Physics	Mr. J. Eliot, M.A. Mr. A. Macdonell, M.A.

Premchand Roychand Studentship Examination.

English	Mr. C. H. Tawney, M.A., C.I.E.
Philosophy	Dr. D. Duncan.
Philology	Dr. A. F. R. Hoernle.
Latin	Mr. H M. Percival, M.A.
History	Mr. M. Prothero.
Sanskrit	Babu Krishnakamal Bhattacharyya.

BENGAL SECRETARIAT LIBRARY

B. L. Examination.

November, 1891.

Mr. W. Gordon Leith.
Mr. J. G. Apcar.
Babu Amarendranath Chatterjee.
Maulavi Serajul Islam, Khan Bahadur.

Honours in Law Examination.

Mr. A. P. Handley
Babu Srinath Das.

M. B. Examinations.

Chemistry	Rai Kanailal De, Bahadur, F.C.S., C.I.E.
Botany	Dr. David Prain.
Comparative Anatomy ...	J. Wood-Mason, Esq.
Anatomy	Dr. K. McLeod.
Physiology...	Mr. J. R. Adie.
Materia Medica	Rai Lalmadhab Mukerjee, Bahadur.
Medicine	Dr. J. B. Gibbons.
Surgery	Dr. O. C. Raye.
Midwifery	Babu Dayalchandra Som.
Pathology	Dr. J. F. P. McConnell.
Hygiene	Dr. W. J. Simpson.
Medical Jurisprudence ...	Dr. S. C. Mukerjee.

Honours in Medicine.

Medicine	Dr. J. F. P. McConnell.
Surgery	Dr. K. McLeod.

M. D. Examination.

Medicine	Dr. E. A. Birch.
Surgery	Dr. K. McLeod.
Midwifery	Dr. C. H. Joubert.
Pathology	Dr. J. F. P. McConnell.
Hygiene	Dr. W. J. Simpson.

L. M. S. Examinations.

Chemistry	Rai Taraprasanna Ray, Bahadur, F.C.S.
Botany	Dr. David Prain.
Physiology	Mr. J. R. Adie.
Anatomy	Dr. K. McLeod.
Materia Medica	Babu Hiralal Ghosh.
Medicine	Dr. J. F. P. McConnell.
Surgery	Dr. O'C. Raye.
Midwifery	Dr. J. H. T. Walsh.

Pathology	... ...	Dr. D. D. Cunningham.
Hygiene ...	... ...	Dr. W. J. Simpson.
Medical Jurisprudence	...	Dr. S. C. Mackenzie.

Engineering Examinations.

Mathematics	... ...	Mr. C. Little, M.A.
Natural Science	... ...	Mr. A. Pedler, F.C.S.
Engineering	... ...	Mr. G. C. Stawell. Mr. W. B. Bestic. Mr. W. B. Gwyther.
Drawing	... ...	Major A. D. McArthur. R.E.
Practical Drawing	...	Mr. S. F. Downing, Mr. J. S. Slater.

A. M. NASH,

Registrar.

SENATE HOUSE,

The 4th April 1892.

Number of Candidates at University Examinations, and the number passed, in each year since 1857.

Year.	Entrance.		First Examination in Arts.		Bachelor of Arts.		Master of Arts.		Licence in Law.		Bachelor in Law.		Doctor in Law.		Licence in Medicine and Surgery.						Bachelor in Medicine.						Doctor in Medicine.		Licence in Civil Engineering.		Bachelor in Civil Engineering.		First Ex. in Engineering.		Licence in Engineering.		Bachelor in Engineering.	
															Prel. Sci. Examination.		First Examination.		Secon Examination.		Prel. Sci. Examination.		First Examination.		Second Examination.													
	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.	No. of candidates.	No. passed.
1857	244	162	...	...	...	...	...	...	...	..	...	...	...	...	...	...	12	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1858	464	111	...	...	13	2	...	...	...	...	19	11	...	...	...	...	40	24	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1859*	1,411	583	...	...	20	10	...	...	...	...	20	3	...	...	...	...	31	12	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1860	809	419	...	...	65	13	...	...	...	...	22	10	...	...	...	...	31	13	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1861	1,058	477	163	94	39	15	1	...	7	‡8	17	8	...	...	...	...	16	7	20	14	...	...	...	...	...	...	1	1	18	14	...	...	...	...	...	...	...	...
1862	1,114	477	220	99	34	24	3	...	16	8	13	9	...	...	...	...	33	18	17	7	...	...	...	...	...	...	2	2	...	...	...	...	...	...	...	...	...	...
1863	1,307	690	272	149	35	25	7	6	19	9	15	9	...	...	...	...	35	16	19	14	...	...	...	...	...	...	2	...	10	5	...	...	...	...	...	...	...	...
1864	1,396	702	321	151	66	30	8	3	1	1	22	19	...	...	...	...	42	22	25	11	...	...	...	...	...	...	1	1	5	2	...	...	...	...	...	...	...	...
1865	1,500	510	446	202	82	45	15	11	7	5	17	17	...	...	...	...	34	14	20	18	...	...	2	2	...	...	...	...	9	...	...	...	...	...	...	...	...	...
1866	1,350	638	426	131	122	79	18	15	17	13	22	11	...	...	...	...	35	10	26	20	...	...	5	5	...	...	...	...	6	6	...	...	...	...	...	...	...	...
1867	1,507	814	388	188	141	62	39	22	17	14	36	28	...	...	...	...	44	17	18	15	...	...	2	1	...	...	...	...	3	2	...	...	...	...	...	...	...	...
1868	1,734	892	423	202	212	99	25	15	10	3	72	51	...	...	...	...	45	6	13	11	...	...	2	1	4	3	...	...	7	4	1	...	...	...	...	...	...	...
1869	1,730	817	520	225	174	77	29	18	32	13	98	61	...	...	...	...	61	27	20	19	...	...	3	2	2	2	...	...	9	3	...	...	...	...	...	...	...	...
1870	1,905	1,099	540	233	210	98	32	24	26	18	87	74	...	...	...	...	56	42	7	5	...	...	4	4	1	1	...	...	12	2	1	...	...	...	...	...	...	...
1871	1,902	767	507	204	212	84	39	35	27	12	83	52	...	...	...	...	58	38	29	27	...	...	2	2	2	1	...	...	14	7	2	1	...	...	...	...	...	...
1872	2,144	938	560	220	232	100	32	24	58	17	102	26	...	...	...	...	68	29	42	27	...	...	2	...	5	3	...	...	18	2	4	1	...	...	...	...	...	...
1873	2,544	848	539	305	242	126	30	22	93	44	137	88	...	...	...	...	77	31	48	23	...	...	1	...	4	2	...	...	22	2	2	...	...	...	...	...	...	...
1874	2,254	966	533	193	212	92	57	32	65	46	103	79	...	...	...	...	113	34	47	36	...	...	6	4	2	1	...	...	16	6	4	3	...	...	...	...	...	...
1875	2,373	838	575	182	217	90	38	18	...	...	71	40	...	...	...	...	155	31	42	13	...	...	11	7	1	...	...	...	12	5	9	3	...	...	...	...	...	...
1876	2,425	1,355	756	344	281	73	38	24	...	...	86	54	...	...	...	...	171	70	55	9	...	...	14	9	5	3	...	...	24	8	10	3	...	...	...	...	...	...
1877	2,720	1,165	791	253	287	144	49	31	...	...	83	61	2	2	...	...	196	46	60	28	...	...	23	9	8	7	...	...	21	5	7	1	...	...	...	...	...	...
1878	2,617	1,098	923	267	228	68	62	28	...	..	61	29	...	...	...	...	104	60	91	34	...	...	22	17	10	7	...	...	21	...	5	...	...	...	...	...	...	...
1879	2,697	1,069	1,040	320	323	91	48	28	...	..	84	47	...	...	...	...	46	16	91	19	...	...	14	7	9	7	...	...	21	5	7	1	...	...	...	...	...	...
1880	2,793	1,666	983	398	319	112	52	32	...	..	89	47	...	...	...	...	18	4	111	65	...	...	29	14	17	7	1	1	27	10	4	3	...	...	...	...	...	...
1881	2,937	1,409	968	364	352	155	56	37	...	..	90	37	...	...	...	...	2	...	47	17	...	...	32	11	15	9	...	...	12	6	...	...	...	...	...	...	...	...
1882	3,111	1,458	1,300	446	358	105	79	32	...	..	109	69	...	...	...	...	3	...	31	10	...	...	38	12	21	10	...	...	7	2	...	...	...	...	...	...	...	...
1883	3,591	1,785	1,495	698	480	197	83	44	...	..	120	96	1	1	...	...	...	...	19	4	...	...	40	12	18	7	...	...	18	3	2	2	5	1	...	...	...	...
1884	...	...	†673	334	501 †249	229 127	86	64	...	...	93	52	1	1	...	...	4	...	7	1	...	...	38	21	21	9	...	...	9	...	...	...	10	5	...	...	...	...
1885	4,317	1,463	936	437	428	307	61	34	...	...	143	77	1	1	...	...	9	3	5	3	...	...	27	13	20	11	...	...	5	2	...	...	4	...	1	1	...	...
1886	4,393	1,337	1,466	762	869	452	101	70	...	...	208	119	...	...	...	...	3	1	9	5	...	...	30	12	32	23	...	...	...	...	...	...	11	2	3	1	2	1
1887	4,974	3,298	1,577	855	823	449	99	56	...	...	223	152	...	...	...	...	21	11	26	18	...	...	38	8	14	10	1	1	...	...	...	...	13	8	2	...	1	1
1888	6,134	2,720	1,514	581	928	378	129	69	...	...	365	244	...	...	...	...	23	14	19	9	...	...	24	9	17	6	1	...	...	...	...	...	13	8	8	4	2	1
1889	5,930	1,475	2,481	715	1165	409	128	64	...	...	360	190	...	...	...	...	20	12	23	15	...	...	26	8	10	7	...	...	...	...	...	...	16	15	9	7	4	2
1890	5,308	2,642	2,872	1,089	1049	435	131	58	...	..	370	257	...	...	14	9	27	20	25	12	15	3	2	7	9	6	1	1	...	...	...	...	11	10	10	7	7	4
1891	5,932	2,151	2,058	762	860	240	134	52	...	..	§335	184	...	...	32	25	10	7	21	13	35	10		2	6	5	1	1	...	...	...	...	12	4	8	3	4	2

* Two Entrance Examinations in 1859. † Supplementary Examinations. ‡ 6 of these were Candidates for the B. L. § Two B. L. Examinations in 1891.

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